

P.T.A.H.

TECHNOLOGY

ENGINEERING APPLICATIONS OF AFRICAN SCIENCES



WRITTEN BY
AFRICAN CREATION ENERGY
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VERSION 1.0

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AFRICAN LIBERATION
SCIENCE, MATHEMATICS, AND TECHNOLOGY

(S.M.A.T.)

BOOK 3

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AFRICAN CREATION ENERGY ALERT:

In Physics, "**Electro-Motive Force**" (EMF or the Force that Moves Electrically charged particles) is defined as the amount of work done by a Source which separates positive and negative electrically charged particles creating a "Potential Difference" and generating an electric field causing the flow of Electric current. The separation of electrically charged particles is called Voltage, and the term "High Voltage" is used to characterize material that can cause a Spark (electrostatic discharge) of electric current to flow between two objects at different electrical potentials causing a Shock to one object by contact or proximity. The symbol above is a modification of the warning symbol for High Voltage. In order for Human beings to use and apply any Knowledge or information that is obtained or received, a separation of the information must take place to determine what is true and what is false, or what is practical and applicable and what is not. Furthermore, once the separation of true information from false information takes place, a separation between people takes place of individuals who are willing and able to apply the information and individuals who are not. This book deals with the Engineering Applications of African Sciences, and therefore the information contained within this book is presented not just to be casually read, but to be used, tested, experimented with, and applied. Therefore, African Creation Energy's modified version of the "High Voltage" warning symbol appears here as a sign to signify the high level of separation (Voltage) that will take place in the benefits received by and between casual readers, studiers, and practitioners (engineers) depending on electrical charge. **Proceeded if you Will.**

African Creation Energy

Creative Solution-Based Technical Consulting

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1. THE OPENER

Technology is the Actual and Practical Application and Use of Knowledge and Information that provides **Solutions to Problems, Answers to Questions, Responses to Calls**, and accomplishes and Achieves some needed or desired goal, result, or task. Technology is "the Art of Science" or "the utilization of scientific information", thus, it stands to reason that the acquisition and comprehension of knowledge (Science) is prerequisite to the application and utilization of knowledge (Technology). You have to know something and understand something before you can do something. The etymology of the word "Technology" comes from the Greek word "Tekhne-" meaning "system, process, method, art, or craft" and also has origins in the Proto-Indo-European word "Tek" meaning "to shape, to build, to construct, or to weave". The suffix "-logy" in the word "Technology" comes from the Greek word "logos", meaning "word, speech, utterance or reason". Thus, the etymological sense of the word "Technology" is "to build or construct by uttering reasonable speech". In Africa, the Ancient deity that created or "constructed the universe by utterance" was the deity **PTAH**, "The Opener".

Technology does not just refer to material objects such as tools, instruments, utensils, apparatuses, buildings, structures, machines, mechanisms, devices, gadgets, and/or

gizmos, but also to immaterial mental objects such as concepts, systems, methods, methodologies, doctrines, techniques, procedures, algorithms, programs, and processes that are created and developed as a result of applying knowledge. Immaterial (mental or “spiritual”) technologies such as concepts, processes, programs, algorithms, and methods serve as the mental blue prints and schematics to create and develop material (physical) technologies such as buildings, tools, and machines. So it is said that “creation occurs from the **Top-down**”; **As Above, So Below**. The manifestation of knowledge into the physical world by way of Creativity in the form of “Technology” is the objective indicator of human knowledge and capability. Thus, the most advanced or highest form of technology at any given point in time is called “**State of the Art**” which indicates the “**State of Mind**”. There is an old saying: “You know the tree by the FRUIT it produces”, likewise, you know a knowledge or science by the Technology created from it. The study of the history of technology is the study of how Nature’s resources are used to accomplish a particular goal or task, and it is due to this reason that the study of technology applies to all creatures and things with the ability to acquire and use knowledge or information. Birds use Nature’s resources to create nests, Spiders use Nature’s resources to create Webs, Bees use Nature’s resources to create Hives, and Beavers use Nature’s resources to create Dams; all of these are examples of technology to their respective species.



**Termite
Mound**



**Skyscrapers
(Human Mounds)**

The Human being or the “Human Organism” is in fact a form of technology resulting from smaller organs and organisms working together and applying their respective knowledge to form a “**craft**” or “technology” that would ensure and prolong their survival and well-being. Therefore, Human technological creations are just as natural as any other creation in Nature. It is erroneous for humans to view their technological creations as separate and distinct from nature because in fact every human technological creation is composed of Nature’s resources. The creative process that began with the creation of the universe, planets, stars, mountains, valleys, and oceans of Nature continues with the creative endeavors of Nature’s creatures in the form of Ant mounds, Human Skyscrapers, and many other creations by many other creatures.

The history of Human technology begins in the location of the origin of Humanity, In Africa. Human technology began with Human use of Nature's resources to create and invent things needed for survival, well-being, adaptation, and control of the surrounding environment. So it is said that "**Necessity and Survival are the mother and father of Invention**". When the earliest Human beings in Africa learned how to "**harness the power of fire**" it proved to be an extremely significant technological advancement, both esoterically and exoterically. Exoterically or operatively, "harnessing the power of fire" provided early Humans in Africa with the means to increase food supply, have warmth and light at night, and develop and create other tools needed for survival. Esoterically or speculatively, considering that "Fire" is a metaphor for "light", "**Energy**", or "knowledge", then the statement "harnessing the power of fire" is a rather symbolic and metaphorical statement that indicates "being able to use energy and apply knowledge" which is "Technology" by definition. Philosophically, "harnessing the power of fire" or "making use of knowledge" is called "**Wisdom**", and the correct, right, and proper use of "Fire" or "Knowledge" is "**Right Wisdom**".

Part of the process of "Right Wisdom" is Creating "**Nature Technology**." Nature Technology is technology that works in accordance with, and is in tune with Nature and Nature's cycles and seasons. The development of "Nature Technology" involves taking into complete consideration the far reaching

causes, effects, implications, and repercussions of the development of a technology. The design, development, and creation of "Nature Technology" is done by "**Nature Engineers**" or "**Nature Technologist**," and Black, African, or Nubian people performing these tasks collectively form the "Nubun Organization of Nature Engineering Technologist" (**N.O.O.N.E.T**) with the root of the words "Nubian" and "Nubun" meaning "to sprout, germinate, or **Create**". Just as the Human being is a technology and produces waste or an unwanted by-product, all forms of technology produce a waste product or "undesired effect", and using "Right Wisdom" in the Creation and formation of "Nature Technology" means not only considering the desired result of a technology, but also considering the undesired result of a technology and considering how both results impact the community, environment, planet, and universe. The Efficiency and Impact of Technology is determined by comparing the desired effects of a Technology to the undesired effects of a Technology. The most Efficient Technologies are those that have little to no undesired effects or "waste" as compared to a multitude of desired effects or "products". Just as the waste from an Organism can serve as fertilizer which can be used to grow and create something new; the waste, by-product, or undesired effect from a "Nature Technology" mechanism, organism, or any other "-ism" is properly harnessed by "Nature Engineers" and "Nature Technologist" to serve as fertilizer from which some new desired thing can gestate, **germinate**, grow, sprout, and be created to continue the desired cycle of creation. This

illustrates that destruction, analysis (meaning to take apart or “break down”), demolition (death), or “the production of waste” is a natural and necessary component of construction, synthesis (meaning to put together or “build up”), and creation (life) process.

Technology, and the developers, inventors, and creators of Technology shape and influence culture, social structure, and Economy because technology is the ability to master and control Natural resources and maintain a certain standard and quality of life. Technology expands human perceptions, reception, and conception, and enables humans to learn new things (acquire new knowledge and develop new Science) which in turn enables the development of new technology in an ongoing process of making the unknown known (squaring the circle) and utilizing the newly acquired information. This shows the intimate relationship between Science as knowledge or information, Mathematics as the means for Human beings to translate and understand Science information into a comprehensible format, and Technology as the result of the actual use of Science or Information via Mathematics. In modern terms, individuals who use Science and Mathematics to manipulate and control nature’s resources through the production of technology are called Engineers. In Ancient Africa, the process of Engineering using Science and Mathematics to create Technology was symbolized by the deity **PTAH** (also pronounced **TAR**) using **Hu** and **Sia** to perform **Heka** respectively. The word “Heka” is translated as “Magic”

and in Ancient Africa “Heka” was associated with the concepts of **power**, authority, influence, or control over Nature’s resources. In Ancient Africa, Heka was used to represent the concept of working with, manipulating, weaving, forging, forming, transforming, building, sculpting, molding, and creating with the chemicals, minerals, elements, components, and various forms of matter in Nature. Heka is considered “Magic”, but is more closely and reasonably related to the modern concept of **Engineering**. It is the practice of Heka (or engineering) that results in Technology such as machines, mechanisms, and Mechanizations, as well as organs (tools), organisms, and organizations. The word “Mechanism,” “Machine,” and the word “Magic” all have the same etymological origin from the Proto-Indo-European word “magh-” meaning “to be able” or “**to have power**” which is Heka by definition. The word “Organ” (which means tool), “Organism” and the word “**Energy**” all share the same etymological origin from the Greek word “ergon” meaning “**to do work**” which again is Heka by definition. The creation and formation of organisms, mechanisms, and all other “-isms” follow the same natural process. In Ancient Africa, Heka along with the concept called **Hu** (the creative force, energy, vibration, drive, reason, or purpose symbolized by utterance and speech) and the concept called **Sia** (insight, comprehension, awareness, knowing, wisdom, and understanding) were the three principles or concepts that the African Creation “God” of Technology and Engineering named PTAH used to create. It is interesting to note that the etymology of the word Engineer

comes from the word "engin" meaning "skill and cleverness" and also the word "ingenium" meaning "**inborn qualities** or talent" and "**gene**" meaning "**to beget or produce**". Given the etymology of the word Engineer, and the definition of the word Engineer as someone who practices Heka or Magic (the process of acquiring and applying scientific and mathematic knowledge for the purpose of manipulating Nature's resources to produce Technology, it implies that this Engineering ability is related to **genes**, genetics, or certain "inborn qualities". It is also true that traditionally Africans viewed the ability to practice Heka (Engineering) with certain blood lineages, genetics, and generations (**generators**). Nature selects and initiates who will manipulate Nature's resources (Engineers) using Genetics and Natural **Capability tests**, and as practitioners of Heka, these **elite** and **elect** individuals are responsible for the survival and well-being of their entire tribe.

The human organism as well as all organisms are forms of technology that were developed by many smaller organisms working together and pooling their respective resources to adapt to an ever-changing environment, and thus the technology of the Human organism (the structure, shape, form, components, and capabilities) has also grown and changed over time. Also, the Technology created and produced by humans goes through a natural growth and change process over time. Mental concepts, ideas, and principles are expanded and built upon by successive generations over time. Physical technologies are also refined, improved, and updated

over time. Just as single-cell organisms combine to form organs and multi-cell organisms; Multi-component mechanisms like clocks require simpler mechanisms like gears to be developed, and then combine and come together to create the multi-component mechanism. Before multi-faceted mental technologies such as doctrines, philosophies, and other "-isms" are created, the individual principles and ideas that make up the "mental technologies" must first be formed and developed, then combined, collected, and refined to form the Multi-faceted mental technology. This is the Natural process of Creation or "Technological Development" that occurs with all things, thus all "Technology" is Natural and a part of Nature. Creations take on the characteristics of their Creator and eventually create as well. As it is said in the religious book called the Bible, God the creator said that "man has become like one of us, knowing good from evil", that is, being able to distinguish, **separate**, open, **PTAH**, create, like "God" the creator.

Just as "Harnessing the power of Fire" proved to be a great technological advancement for early humans, the greatest technological advancement in modern human technological development has been the ability to "**harness the power of electricity**". More than any other technology, electricity is the technology that **energizes**, **powers**, and runs the modern world, but it is also the most mysterious and misunderstood by the vast majority of its users. The use of electricity on Earth is visible from space which means **the planet Earth is emitting light** (electromagnetic radiation) **like a sun due to electrical**

technology. The dominance of the application of Electrical knowledge in the field of Technology is evident in the fact that when the term “technology” is used colloquially and commonly, the first thing that comes to mind is electronic gadgets, computers, stereos, telephones and other electronic Gizmos. Any technology that is considered “state of the art” in the modern world will most definitely have an electrical component. Electricity is energy and power, therefore anyone with knowledge of how to harness electricity is literally **powerful**. Electric Power companies literally have “Power” over individuals who lack the knowledge, ability, or will to obtain power for themselves. In the modern world, electrical power and the associated technologies that run on electricity have become a near necessity, and people are dependant upon (slaves to) power companies to provide them with electricity and light. In the event of a “power outage” or when “**the lights go out**” people dependant on the power distributors to provide them with power, energy, electricity, and **Light** nearly go insane and “lose their minds” as if their means to survive (fire) had been extinguished. This book entitled “*P.T.A.H. Technology: Engineering Applications of African Sciences*” seeks to **Liberate** and **empower** the African reader by providing instruction on how to obtain **Power** in the form of electricity using concepts and principles associated with the African Creation God of technology PTAH. As the old saying goes, “give a man a fish and he will eat for a day, but teach a man how to fish and he will eat for a lifetime”. The practical application

and usage of information within this book makes the reader a metaphorical “Fisherman” of electrical power and energy.

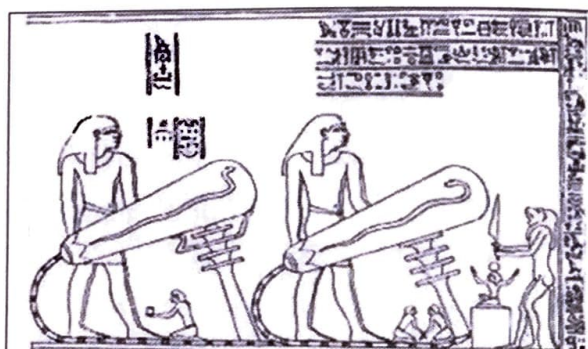


The use of Electricity on Earth is visible from Space making the planet Earth give off light like a sun

Whereas most of the modern developments in harnessing the power of electricity have only occurred in the last 200 years, the use of electricity is not a technology that is unique to the modern world. When the history of electrical technology is researched, it is said that the word “electricity” comes from the Ancient Greek word “**Electron**” which in the Greek language supposedly means “**Amber**” (which is fossilized tree **TAR** and very similar to Human **blood clots**). It is said that the word “Electron” (meaning Amber or TAR in Greek) was chosen as a word for the phenomenon known as “electricity” because of the “**static electricity**” that could be experienced by rubbing a piece of “Amber” (Tar). However, the Greek word “Electron” is actually a compound word consisting of the words “**Elect**” which has its etymological origin in the word **Lexis** and **Logos** (which was **HU**, the creative utterance of **PTAH** in Africa) and “-

tron" which is similar in meaning to "tek" in that it indicates "something that performs some action". The question must be asked, "Why did the Greeks choose to call **"TAR"** (or Amber) which they say is the **origin of Electricity** by the name "Electron" which literally means **"something that performs Logos or utterance (Hu)"**? This book will present compelling evidence that the foundation of modern Electrical Engineering and Technology concepts that are credited to Europeans are in fact derived from the African God of Technology **PTAH** (pronounced TAR) who performs creation via utterance.

Ancient Africans in Egypt and all along the Nile River and throughout Africa had knowledge of electricity at the very least from interactions with **Electric Eels**, **Electric Rays**, **Electric Torpedo**



Drawing from The Temple of Dendera which Appears to Depict the use of electricity to Produce Light in Ancient Africa

fish, and other Electric fish and aquatic creatures (called **Nuwn** in Hebrew which is a reference to the Primordial waters called **Nun** in Egypt) who they referred to as **"Thunderers of the Nile"** and "protectors of other fish". Images from the temple of Dendera in Egypt show what appears to be electrical technology in the form of Light bulbs being "held up" and

"supported by" stable **Djed pillars**. These Egyptian hieroglyphics, images, and symbols are no different from modern electronic symbols in that they are used to represent and symbolize electronic components in an electronic circuit schematic or diagram. The images from the Temple of Dendera have a dual functionality serving both a real practical (operative or exoteric) purpose, as well as a symbolic (speculative or esoteric) purpose. In reality, as we discuss later in this book, the Ancient Egyptian symbol of the Djed pillar can be used as a real source of Electricity from which Light can be obtained. Esoterically, this image depicts the Djed pillar which is a symbol of "stability" (or "DC Voltage" in modern Electrical terms) supporting a serpent or "electric eel" (Nun) which is a symbol for "variability or waves" (or "AC" in modern electrical terms) being projected from a Lotus flower as **Light** which is a symbol of knowledge. The Lotus flower is significant because it is an **aquatic plant** whose **seeds** (in this case "Light" or "knowledge about light" or electro-magnetism and electricity) can remain viable for hundreds of years and eventually rise from the muck and mire and blossom at the surface of the water symbolizing rebirth and renewal. The image from the Temple of Dendera shows that electricity was used in Ancient Africa to produce both literal and metaphorical light, and now the seeds from Ancient Africa have risen from the muck and mire through hundreds of years of confusion and deception to renew and reclaim African Electrical Science and Technology for the African Elite and Elect.

The Copyrights and **Patents** on Electrical concepts and Technology come out of Africa. The modern laws on "copyrights" and "patents" where the creator or inventor of something supposedly owns it as "**Intellectual Property**" as either an individual, business, company, or organization, but then has to ask permission from their government and pay their government to recognize them as creator or inventor shows that the "Intellectual Property" in fact belongs to the people because it is the ruling body of the people (the government) that must give it recognition. Furthermore, if the creator or inventor fails to pay their government under modern copyright and patent laws, or after a certain period of time, the copyright and patent goes into the "**Public Domain**" which means it is owned by the people and **NO ONE** individual, business, company, or organization in particular. Nature Engineers and Nature Technologist who make practical use of Nature's resources in accordance with Nature's cycles and seasons in a "**True Culture Society**" understand that the development of creations and inventions is done for the survival and well-being of the people; that is the African way. The intellect or creative mind of Nature works through all people, so often times a creation or invention is thought of by various people in different locations who never met or spoke to one another about their ideas. Nature Engineers and Nature Technologist must remove "self" and "**ego**" from the creative and inventive process and consider the tribe. Likewise, the tribe should respectfully thank, recognize, and show gratitude to the creator or creators as the "**conduit**" through which the

source "Creative Mind of Nature" channels a creation developed for collective usage. Therefore, formal gratitude is given to Africa and the African Creation deity **PTAH** for the **Patents** on Electrical Engineering concepts and technology. The word "**Patent**" shares etymological origins with the words "Patron, Pattern, Patronus, and Pater" which collectively have meanings referring to "the archetype, that which is to be copied, a Model or Design, a lord or master, father, and to open or to spread"; which is PTAH by definition. Thus, a "blue print", schematic, **pattern**, or **Patent** is **PTAH** by definition; that which creates.

This book entitled "*P.T.AH. Technology: Engineering Applications of African Sciences*" describes using **creative words** how modern scientific concepts related to electricity and power are African in origin. However, the concepts presented in this book have more and broader applications in other fields beyond Electronics and Electrical Engineering, such as Thermodynamics, Hydraulics, and Philosophy just to name a few. This book also provides **experiments** for the reader to obtain first hand **experience** with **evidence** that "**shows and proves**" the applicability and usefulness of the African scientific concepts presented. As the saying goes "I can show you better than I can tell you" and "actions speak louder than words". This book deals with the Engineering applications of African Sciences in the forward sense of those operative African Sciences that are readily available to be practiced, applied, used, and discussed as they relate to the field of Electronics, Electricity, Energy, and Power. Also, this book deals with the

concept of **RE-Engineering** or "**Reverse Engineering**" African Sciences which is the process of restoring, reclaiming, and renewing African Scientific and Engineering concepts, ideas, and principles that originated in Africa that are falsely claimed to have originated else where. This book "**TEACHES TECH**" or "**INSTRUCTS on how to CONSTRUCT**", and therefore the reader must be not only conscious, but also active. The active reader that uses and applies the information contained within this book will literally become "**Powerful**" in that the reader will have knowledge on how to use the raw materials and Natural Resources of the Earth to Create Electricity, Energy, and Power; real "**Black Power**" (*Black Magic*). This book and other books written and published by the coined term "**African Creation Energy**" are introductory educational tools for a long term goal and mission of growing, cultivating, nurturing, encouraging, supporting, advancing, and promoting African Creativity, Inventiveness, and Ingenuity for the purpose of developing, engineering, forming, formulating, innovating, inventing, designing, building, and creating any materials, structures, machines, devices, systems, and processes needed for survival and well-being by African people for African people. With that said, the importance of applying knowledge or information to Create Technology which produces Electrical Power and Energy is illustrated, described, taught, and emphasized in this book.

2. AFRICAN CREATION "GODS" OF TECHNOLOGY

Reasonable Scientific and analytical investigation into the various concepts of "God" from around the world and the various stories, signs, and symbols associated with the many concepts of "God" from around the world leads to the conclusion that the concept of "God" can be likened to that of a "Mathematical Object".

"Mathematical Objects" are mental ideas, concepts, symbols, and/or abstractions that are used to model, represent, symbolize, and provide a way for the Human mind to comprehend and explain various observed phenomenon and aspects of reality and the natural world.

Just like Mathematical objects, there is no overwhelming concrete proof or evidence that "God" exists in the real world as described by the various stories associated with the respective "God" concepts. However, just like Mathematical Objects, examples can be found in reality and the Natural World that corresponds to the various definitions, descriptions, metaphorical and/or symbolic aspects associated with "God" and god concepts.

This mental process of conceptually, figuratively, and symbolically depicting, portraying, and displaying real natural phenomenon for the purpose of learning, comprehending,

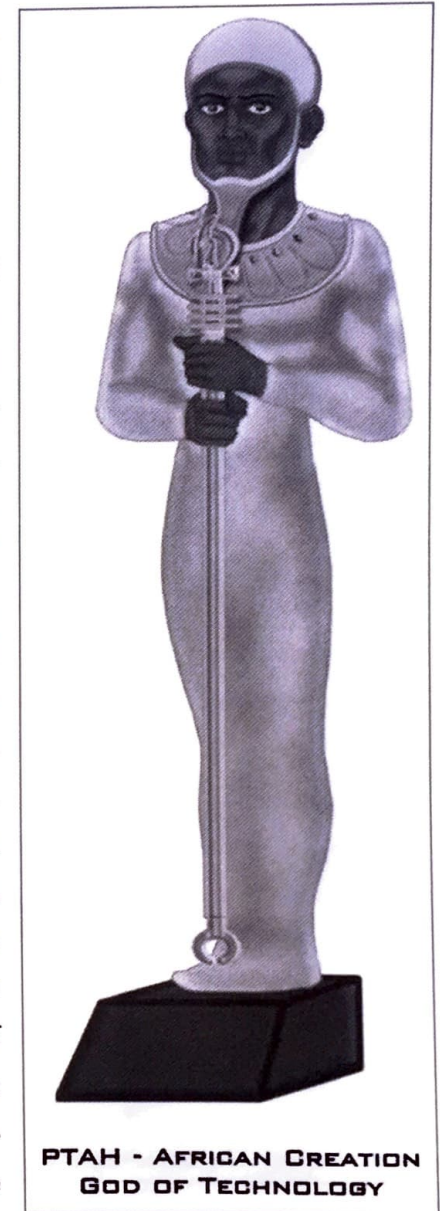
applying, and manipulating Nature began with the earliest humans in Africa. One major concept and phenomenon that the God concept explanation is used for is that of Creation or bringing things into being and existence.

In order for God to Create, God must have knowledge of how to create and knowledge of what, when, and where to create, as well as the ability and desire to use and act on the knowledge to create. Therefore, characteristics, Qualities, and attributes are associated to the God concept such as The All Knowing, The All Powerful, The all Wise, etc. to facilitate the function of The Creator, The Maker, and the Fashioner. As stated earlier, the use and application of Knowledge is the definition of Technology, therefore, any "All Knowing" God that uses the acquired infinite knowledge for Creating is in essence a "God of Technology". Specifically, Creation Gods or Creation deities are referred to as the **Demiurge** in religion and philosophy, and thus implies a divine "**skilled worker**", artisan, craftsman, architect, or engineer.

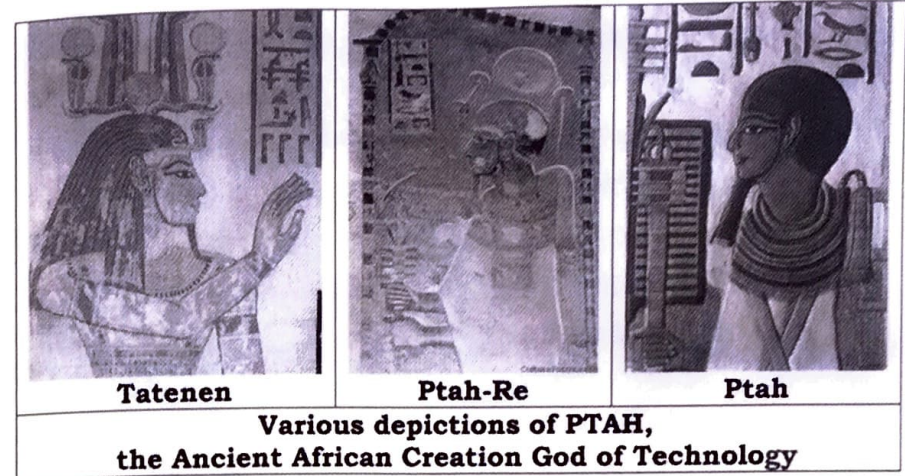
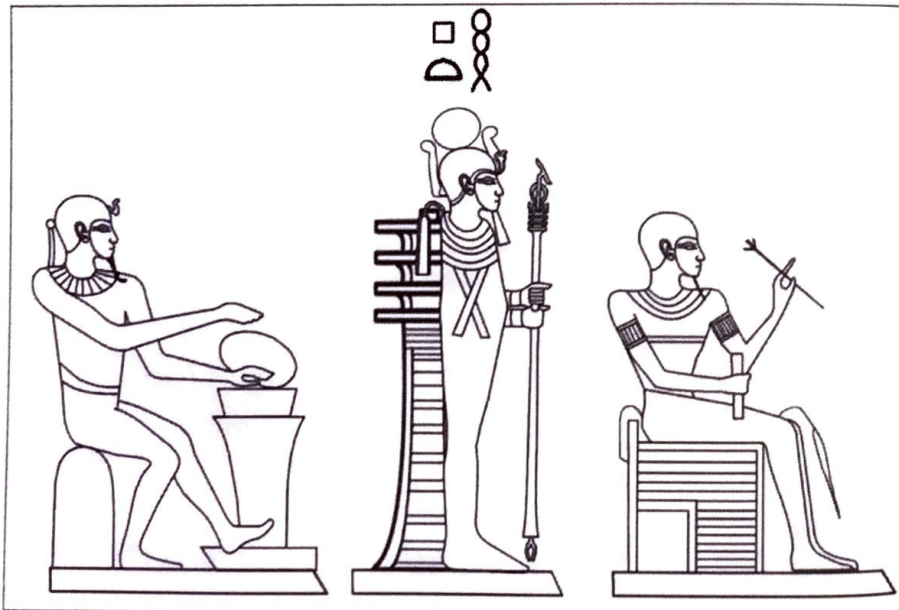
One of the earliest (if not the FIRST) African Creation "God" of technology was the deity **PTAH** (pronounced "**Ta**" or "**Tar**"). Ptaḥ was considered the Grand Architect of the Universe, Divine Craftsman, and the **Primary Creator** that was responsible for creating himself, the universe, the heavens and the earth, as well as the other deities, and thus was given the title "**The Ancient One**". Ptaḥ was considered the God of

craftsmen, blacksmiths, Artist, Artisans, Stonecutters, Architects, Builders, Sculptors, Masons, and Engineers.

Ptaḥ was depicted as a bearded man wearing a skullcap or **Kufi** representing protection of the mind, and his body was shrouded so that only his hands are free, representing taking action on his thoughts of his mind. In the coffin texts, in Spell 1130, Ptaḥ says, "*I am the Master of Creative Fire who lives on Truth.*" Ptaḥ is depicted shrouded to show that this Creative "Fire" (desire, passion, and energy) must be tempered and controlled with reason. His hands were shown holding a scepter that was a combination of the **Djed Pillar**, **Ankh**, and **Was** which represented the tools that aided Ptaḥ to design and create his creations and inventions. In the city of Memphis, Ptaḥ was part of a triad including his wife **Sekhmet** and his son **Nefer-Tum**. In the **Memphite Theology** named for the Egyptian city of Memphis or **Men-**

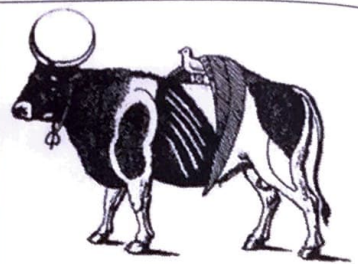


Nefer (also **Hut-Ka-Ptah**), which was dates back to 4000 B.C. and was carved on the "**Shabaka Stone**" during the **Nubian 25th dynasty of Egypt**, the African deity **Ptah** was described as "**The Opener who through creative utterance, called the universe into existence after having imagined creating in his heart and speaking it with his tongue**". By definition of function, the role of the African deity Ptah in African philosophy is equivalent to the **Logos** (creative utterance or **Logic**, the **Tongue**) and the **Nous** (intention of the Mind or **Reason**, which the Egyptian believed existed in the **Heart**) in Greek Philosophy. Depictions of the African deity Ptah show him standing on a 4-sided platform foundation which represented **Ma'at** (truth and order). The name "Ptah" has been translated as meaning "Creator" and also has been translated as meaning "The Opener" or "Sculptor".



Although PTAH as a deity was known to all of the people in Ancient Egypt, the "worship" of Ptah, or "the study and practice of the science and art from the "school of Ptah" was only available to certain **Elite** and **Elect** individuals considered the "priesthood of PTAH". Therefore, the many principles and doctrines associated with PTAH were kept a mystery and a secret from the general public in order to preserve the craft. Derivatives of the name "PTAH" are found in the bible as "Japheth" (Strong's H3315) translated as "opened", "Riphat" (Strong's H7384) translated as "spoken", "pathach" (Strong's H6605) translated as "to open" or "to carve or engrave", "pehter" (Strong's H6363) translated as "firstborn, firstling, or that which separates or opens first", and "patsah" (Strong's H6475) translated as "to part, to open the mouth, to separate, or to set free (**Liberate**)".

The Apis (or "**Hapis**") Bull was considered the soul of Ptah. Phonetically, the zodiac sign **Taurus** which represents the Bull is similar to "**Ptah-Apis**" (pronounced Tar-Apis). While alive, the bull was known as the spokesman of Ptah and the Soul of Ptah (called the **BA**). Apis is also considered one of the sons of Ptah. It was believed that the Apis Bull was conceived from a **Bolt of Lightning**. The appearance of the Apis Bull was black with a white diamond on his forehead, the image of a vulture on his back, double hairs on his tail and a scarab mark under his tongue. The Egyptians thought **Lightning was Ptah in the form of a celestial fire, and the Thunder that came from the Lightning was the tone of Ptah**. It was believed that Ptah in the form of Lightning mated with a celestial heifer (thought to be either **Isis** or **Hathor**) and gave birth to Apis.



APIS
Sacred Bull of Ptah

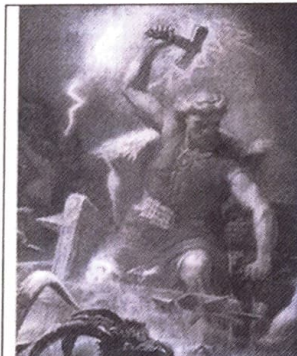


Symbol for Taurus



Left: Thunder and Lightning can be a reaction caused by Volcanic eruptions and Tornadoes.

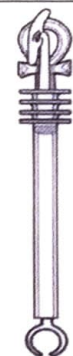
Scientifically, **Lightning**, or electrical discharge, is the visual representation of the **sound of Thunder**. The etymology of the word "**Thunder**" comes from the Swedish words "**Thor's Din**", and is also the origin of the word **Tornado**. Thor was the European Norse version of Ptah, and even the name "Thor" is phonetically similar to the name Ptah (Tar). Thor was said to be a Norse deity of **Thunder** and **Blacksmiths** who was depicted wielding a hammer called **Mjölnir** which was a modified version of Ptah's **Ankh** scepter. Other European versions of Ptah included Irish **Tuireann**, Celtic **Taranis**, the Greek **Hephaestus**, **Iapetus**, and Roman **Vulcan** which is the origin of the word "**Volcano**", and was said to have used Volcanoes as a **Forge** for Blacksmith metallurgy. Volcanic eruptions into the atmosphere can cause **Thunder** and **Lightening**. Examining the names Thor, Tuireann, Taranis, and Hephaestus shows how these derived from Ptah, Ta, Tar.



Thor - Norse deity of Thunder and Blacksmiths



Mjölnir - Hammer wielded by Thor, modified form of Ankh



Scepter of Ptah, combination of Djed, Ankh, and Waas



Magma or Molten rock pouring from a Volcanic eruption

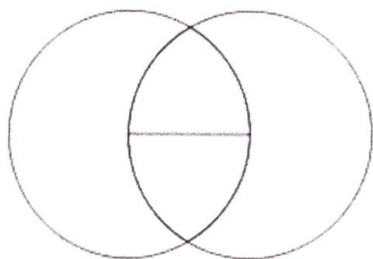


Molten Metal being poured from a Blacksmith's "Melting Pot" into a Mold

The Norse deity **Thor** was identified by the Greeks as **Zeus** (also pronounced Deuce, Deus, or Dios) which was a shortened version of the Roman Ju-piter whose etymological origin is "Zeu-Peter" or "Dios-Pater" meaning "God **Father**". The planet "Jupiter" in modern Astronomy was named for the Roman deity Jupiter and was called **Nibiru** in Babylonian astronomy. Zeus and Jupiter were Greek and Roman deities considered the supreme deity and the "Father of Gods" and symbolized by **Thunderbolts, Lightning**, and the **Bull**.



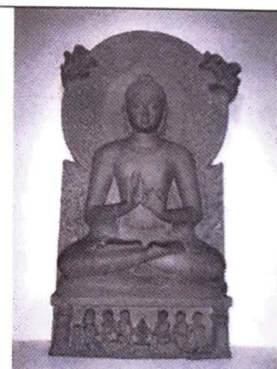
Jupiter Zeus-Pater or Deuce-Peter Greco-Roman deity of Thunder and Lightning deity derived from Ptah



Symbol for the Dyad, Duad, or Duce representing "Two-ness" (Ptah-ness) in Greek Philosophy symbolic of "Nous", Divine Mind or Reason

By functional definition these European deities were derivatives of the African deity Ptah and even the Etymological origin of the names of these deities are derivatives of the name Ptah. The first part of Jupiter as "*Zeus Peter*", "*Dios Pater*", "*Dyaus Pitar*", or "*Tiwos Pita*" etc basically derives from the words Deuce, Dios, Duad, Duo, **Two**, **Two-n**, or **Twa** which is the **Dyad** or **Duad** principle of "two-ness" in Greek philosophy which was the **Divine Mind "Nous"** symbolized by Ptah in African Philosophy. Even the word "Two" or "Twa" is a derivative of the pronunciation of Ptah as "Ta". The second part of Jupiter (Zeus Pitar) which is "Pitar", "Pater", "Peter" meaning "**Father**" (to **create**, beget, originate, etc) is a clear derivative in pronunciation and meaning to Ptah, and is also associated with the Arabic word "**Fataha**" or "**Fatiha**" meaning "**Opening**" which is the title of the **first** or **opening** chapter of the Muslim Holy book The Quran. In order to "open" something you must "distinguish" or "separate" something.


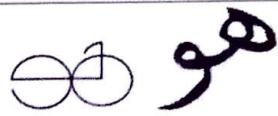


It has also been suggested that the name **Ptah** is the origin of the title "**Buddha**" meaning "awakened one" or "the enlightened one" in Asian culture. According to A.K. Coomaraswamy in the book entitled "*The Origin of the Buddha Image & Elements of Buddhist Iconography*", the name Ptah was corrupted by the Greeks as "Putah" and "Phutah" then eventually spread



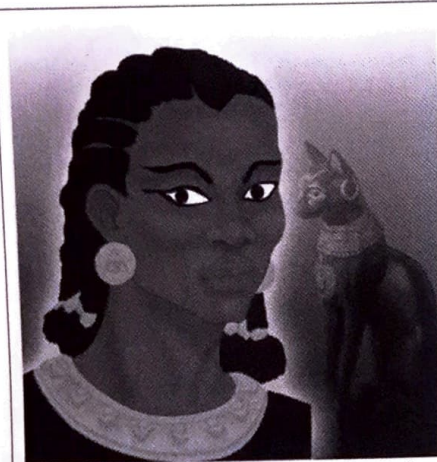
"Buddha" in Asia derived from the African name PTAH

in Asia as “Pudah” or “Buddha”. The description of Ptah creating by imagining or visualizing a creation “in his heart” and then causing the creation to come into being by “Speaking it with his tongue” means that Ptah served as the Architect who designed the Blueprints and the Builder who formed the Structure; the Engineer who drew the schematic and the Technician who put it together. Ptah was the metaphorical “**Weaver and the Blacksmith**” in one.

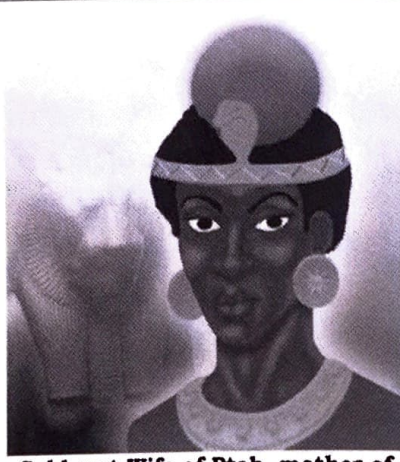
The **Spoken Word** or the **act** of speaking or calling things to come into existence, that Ptah uses to create manifests and grows into tangible creations which is why it is said that **Actions Speak Louder Than Words**. The Creative Utterance, Word, tone, pulsation, sound (thunder), or Vibration of **Ptah** was called **Hu** (also **Huhi** or **Huwa**) in Egypt. There are many similarities between the Nubian Triad of Ptah (Creator), **Sekhmet** (Destroyer), and **Nefertum** (Completer) to the Hindu triad of Brahman (Creator), Shiva (Destroyer), and Vishnu (Preserver). The Hindu creator deity Brahman, whose name means “to Grow” – which is the same thing as “To Create” (Ptah), is also associated to a bull known as the “**Brahma Bull**”. The creative tone that the Hindu deity Brahman uses to create is called **Aum** or **Om** (pronounced like **Ohm**). Examining the geometric construction of the symbol for the African Nubian “tone of creation” uttered by Ptah - **Hu**, and the Indian Hindu “tone of Creation” spoken by Brahman - “**Om**” shows striking similarities. A similar symbol is used in the logo of the electrical company called “**G.E. - General Electric**”.

 <p>Egyptian Hieroglyph for H or “Hu” the Creative tone of the African Creation deity PTAH</p>	 <p>Huwa, In two forms, Arabic word for “He” used to refer to Islamic Creation Deity Allah</p>
 <p>Aum or Om Symbol for the Creative tone of the Hindu deity Brahman</p>	 <p>imagination at work Logo for company General Electric (G.E.) containing a symbol similar to Hu and Om</p>

Nefer-tum, Ptah’s son by his wife **Sekhmet**, was a younger version of the Egyptian city of Heliopolis’ main creation deity named **Atum** (also called **Tum** meaning “the complete or finished one”). Ptah was also considered the father of the Lion-headed **deity of war, weather, and weapons** named **Maahes**. The mother of Maahes was Ptah’s other wife named **Bast**. Maahes was called **The Lion Prince** (or “*Lion King*” called Sundiata or **Sun-Djata** in the Malian Empire), and was depicted carrying a Knife, Sword, or **Saber**. Maahes was also associated with the lion-headed warrior deity **Apedemak** who was worshipped in Nubia Sudan by the **Beja** warrior archers called the **Medjay**.



Bast Wife of Ptah and mother of
Maahes

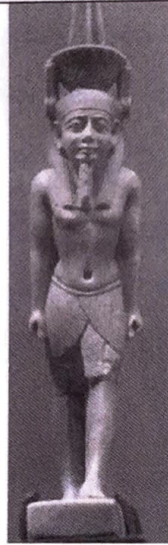


Sekhmet Wife of Ptah, mother of
Nefertum

Sons of PTAH



Maahes or Apedemak

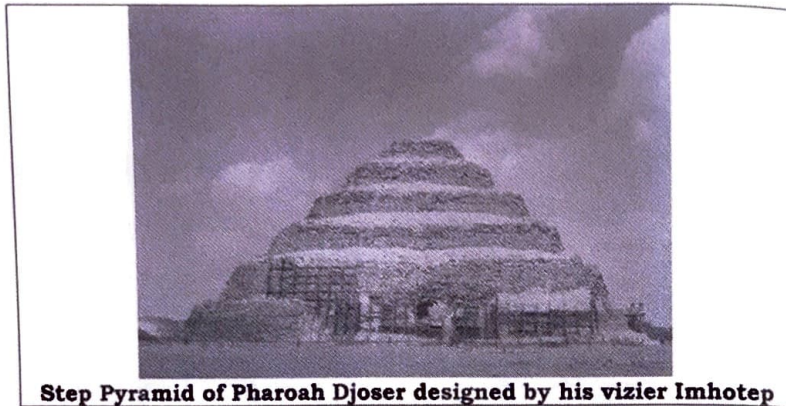


Nefertum



Im-Hotep

The Various craftsmen, stonecutters, blacksmiths, builders, architects, artisans, and engineers in Ancient Nubia considered Ptah to be the patron of their respective crafts, and the most skilled and talented would be considered "High Priests" of Ptah (given the title *hrp hmwt*, pronounced '*kherepou hemout*', or '*kherep Hemutu*', meaning "Supreme Controller of the Master Builders" – basically the Managers and Supervisors of craftsmen, builders/constructors (Hemutu), and building projects) who protected the technical knowledge of their craft. The most elite would be given the honor and distinction of "**Sun of Ptah**". The Hemutu were skilled, intelligent, and knowledgeable laborers, workers, and builders as opposed to the definition of "**Kingu**" in Babylonian mythology which referred to an ignorant "**unskilled laborer**". The Hemutu symbolically rose from the **inert** (unskilled and inactive) Nu as Ptah, creators. This is why **PTAH** was considered the manifestation of "the Hidden" or **Amun** abilities as written in the Shabaka stone. The Hemutu or "**High Priest of PTAH**" often served as Vizier (burden-bearer or helper) to the ruling Pharaoh, and in some cases served as pharaoh themselves. While the position of vizier to the Pharaoh existed throughout Ancient Egypt, the title **Hemutu** or "High Priest of PTAH" can be traced back to the Old Kingdom in the 3rd Dynasty of Egypt.

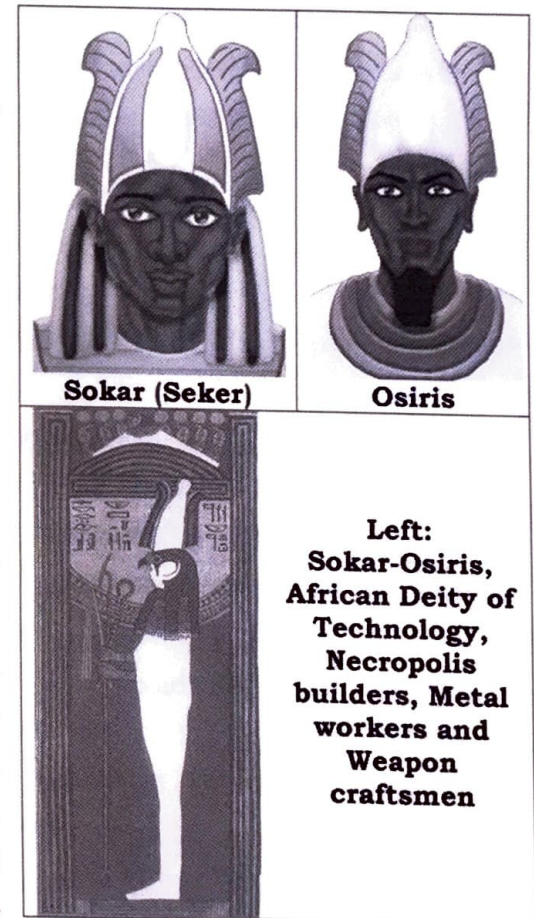


Step Pyramid of Pharaoh Djoser designed by his vizier Imhotep

The first individual with the title “High Priest of Ptah” was a Nobleman and Craftsmen named **Ptah-Du-Auu**. Until the 6th dynasty of Pepi I, there were always two **Hemutu**, and from **Sabu “the black” Thety** onward, the position was consolidated to one individual. The position of Hemutu was usually kept within certain blood lineages much like the position of pharaoh. Names of some “High Priest of Ptah” were **Ra-Nefer, Khu-ti-Ptah, Nebi-Pu (Nebpou), Ptah-mose**, and **Mery-Ptah**. One of the most notable craftsmen to be given the honor and distinction of “sun of Ptah” was the multi-genius polymath, engineer, architect, and physician from Egypt’s 3rd Dynasty named **Im-hotep**. While Im-Hotep was called the “son of Ptah”, Im-hotep’s wife **Renpet-Nefret** was called the daughter of Ptah. Im-hotep, or Petoh-Mi in the opposite direction, served as royal advisor to the 3rd Dynasty King **Djoser**. Im-hotep was the inventor of the papyrus scroll, the architect of the first Egyptian pyramid - the **Step Pyramid of Djoser**, and the author extensive journals on Medicine,

Anatomy, and Biology. Pyramid and Obelisk structures were said to be representations of the original “**Primordial Mound**” that rose from the chaotic waters of **Nun**. This primordial mound was deified as an Earth god called **Tatenen** or **Ptah-Tano** or **Ptah-Nun**, an epithet of Ptah. Imhotep’s exceptional technical expertise earned him the title of “Sun of Ptah” and even though he was a mortal, he was deified and considered a god after his death in the city of Memphis.

Ptah also became merged with the deity **Sokar** in the city of Memphis. **Sokar** (also spelled **Seker**) was an underworld deity who was also a patron of the builders of the necropolis cities, and patron of craftsmen, Jewelers, Goldsmiths, weapon Makers, armor makers, blacksmiths, and other metal workers. Sokar was depicted as a mummified man with the head of a Hawk, and green skin representing



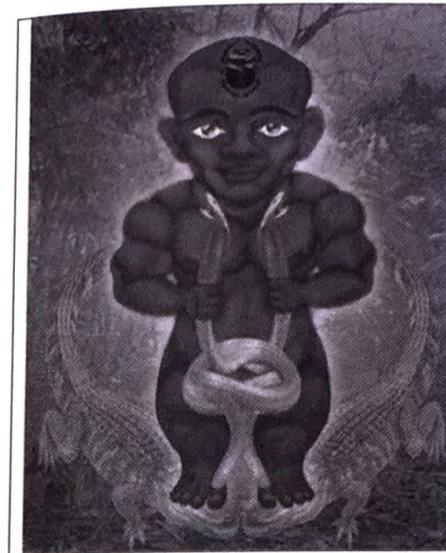
Left:
Sokar-Osiris,
African Deity of
Technology,
Necropolis
builders, Metal
workers and
Weapon
craftsmen

rebirth, holding a scepter and a whip. Sokar was celebrated at the **Henu** festival in the city of Thebes as the resurrection of Osiris where he was carried in a golden barque boat during the festival's parade.

As Ptah became associated with Sokar since both deities were associated with craftsmen, then the deity **Ptah-Sokar** represented the "**growth power of soil to Create life**". The patron of craftsmen became more specific after Sokar became merged with Ptah, with Sokar being considered the patron of Metal Workers and Ptah was considered the patron of Stone workers. However, this is a very similar relationship since metal is obtained from "stones".

Eventually the deity Ptah-Sokar became merged with the deity Osiris becoming **Ptah-Seker-Osiris**. Osiris was a deity of the "Afterlife", Underworld, "Death", or "Unconsciousness" and also was associated with resurrection or "returning to consciousness". Osiris was depicted as a man with Black skin (representing his association to Fertility or the ability to create) or as a man with Green skin (representing his association to vegetation, symbolic of growth, and creation). The combination **Ptah-Seker-Osiris** represented the triad principles of **Creation, Stability, and Death** in the Universe. The Greeks pronounced the deity Ptah-Seker-Osiris as **Pataikos** or **Pataikoi** or **Pataeke**. The deity **Patake** (Ptah-Sokar-Osiris) was depicted as a nude dwarf with a scarab beetle on his bald

head, standing on crocodiles and holding serpents in his hands. Patake was also regarded as a son of Ptah, or in some cases a younger manifestation of Ptah.

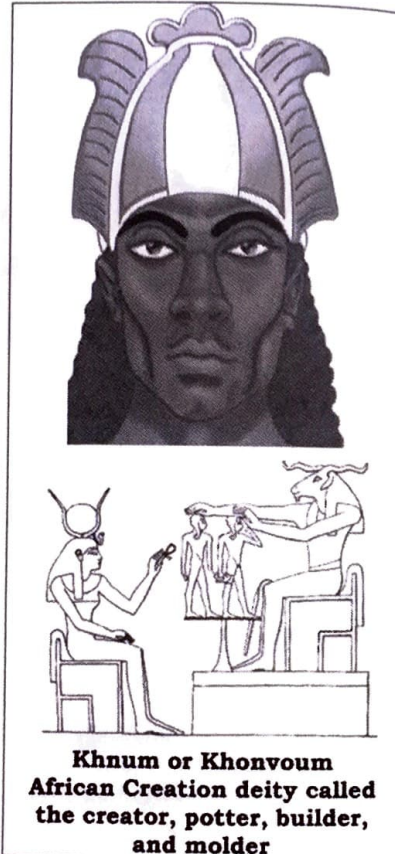


Left: Patake, Ptah-Sokar-Osiris, African deity of Technology and Craftsmen. Symbolizing Creation, Stability, and Death. Depicted as an African Pygmy dwarf in divinity

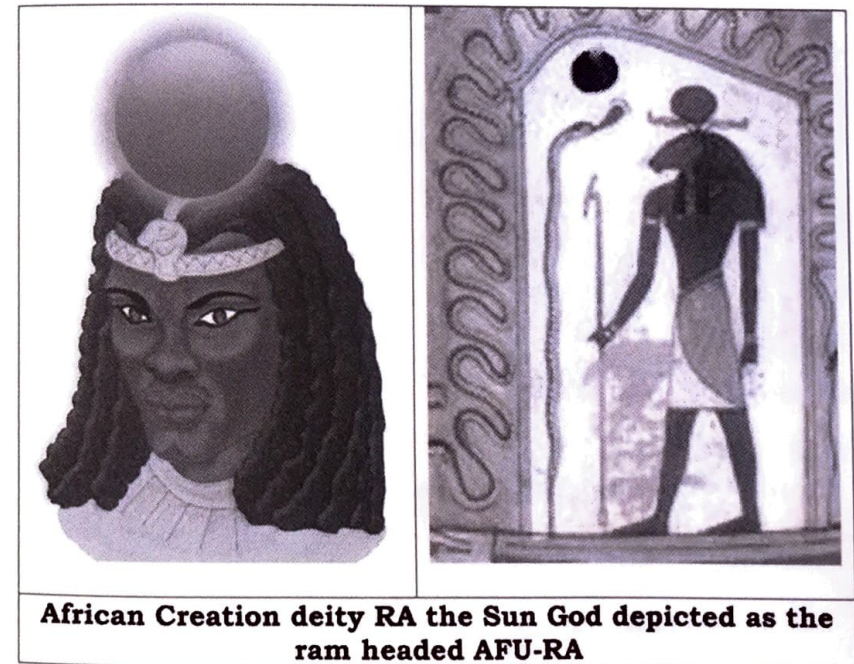
The depiction of the African God of Technology and craftsmen as a dwarf gave rise to similar stories and themes around the world where Dwarfs and Elves were considered master craftsmen and builders such as the seven Dwarfs who worked in the Mines in the story of "**Snow White and the 7 Dwarfs**" or "**Santa Clause's little Elves**" who made all of the toys in Santa's workshop. However, the motivation for these Dwarf craftsmen stories, as well as the depiction of the deity Ptah as a dwarf came from the **African Pygmies** at the source of the Nile River in the Area of the present day countries of Uganda, Congo, and Kenya. These African Pygmy craftsmen tribes, called **Mmortia** in Akan culture and **Tellem** to the Dogon people, design Technologies according to and in harmony with

Nature and still bear the name of creation deity Ptah such as the **Mbuta** or **Bambuta** Tribe and the **Twa Tribe** (also called the **Ba-Twa** meaning "Soul of Ptah"). The **Twa** African Pygmies in the countries of Burundi and Rwanda share the area with the much taller tribe called the **Tutsi**, **Ban-tu**, and the **Hu-tu** Tribe who is suggested to be related to both the Tutsi and Twa Tribes. The etymology of the word "**Pygmy**" is "**Cubit**".

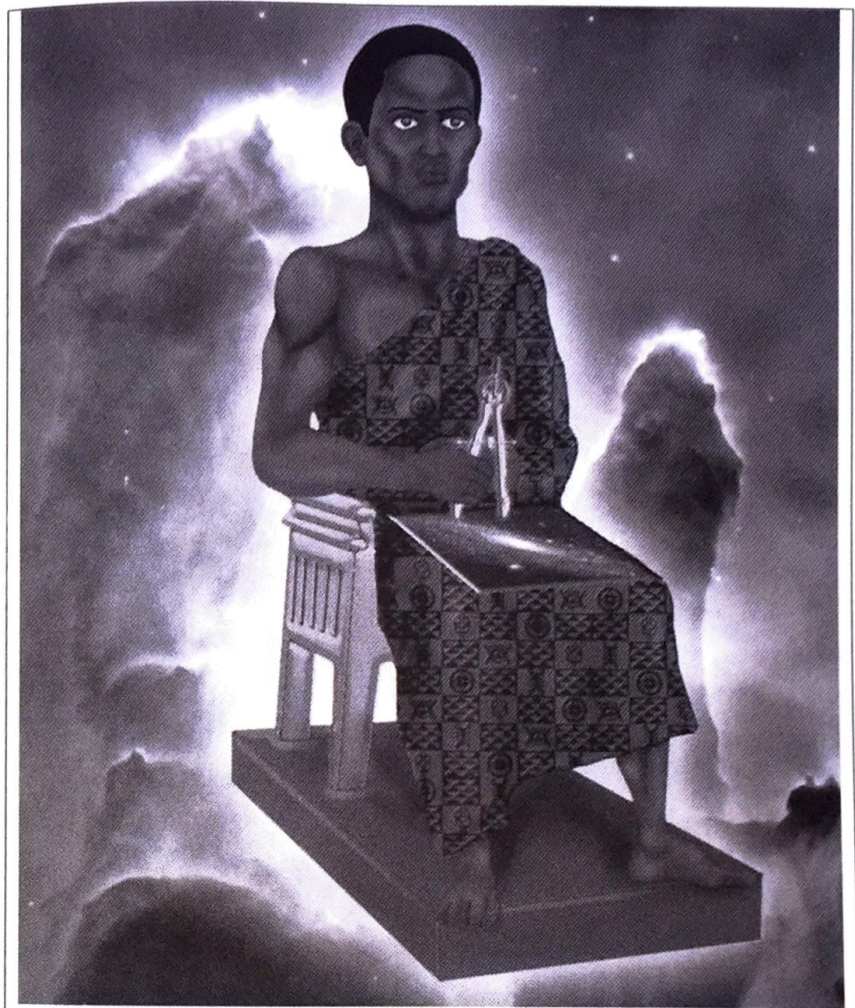
The supreme Creator deity of the Bambuta Pygmies in Central Africa is the deity named **Khonvoun** who is considered the god of the Hunters and **Weaponry**. In the Bambuta Pygmy's creation story, it states that Khonvoun created the different races of people from different types of clay. The African creation deity **Khonvoun** was called **Khnum** in ancient Egypt, and it was said that Khnum created, shaped, molded, and fashioned the bodies of humans out of clay on his **Potter's Wheel**. The name Khnum means "to build, unite, or join" and he was also considered the "divine potter or molder", "master of created things", and the father of "Magic" (Heka) or Engineering.



Khnum was also considered a fertility deity which was symbolic of the ability to Create. In art, Khnum was depicted as a man with the head of a **Ram** or **Bull** and was identified as the soul of the Egyptian **solar** / sun deity **Ra**. The Egyptian sun god **Ra** (or **RE**), who was a god of creation and technology as well, was also depicted as a man with the head of a Ram and identical in appearance to Khnum in this form called **Afu-RA** (meaning the flesh of RA or "the body of the sun") as illustrated in "**The Book of Gates**". It has been suggested that this term **Afu-RA** is one possible etymological origin of the name **Africa**.



The African Creation God of Technology PTAH can be found in the deities of West Africa also. According to the author named "Kwesi Ra Nehem Ptah Akhan" in his book entitled "**Afuraka / Afuraitkait: The Origin of the term Africa**", he states that the name of the deity **Ptah** transformed from Potah, Podah, Podeh, Boade, and eventually to **Oboadee** - the name for the Akan deity responsible for Creating the Universe. Traditional West African Akan beliefs in the African countries of Ghana, Ivory Coast, Togo, Benin, Burkina Faso, Nigeria, and Liberia, view the Supreme Being as **Odomankoma**, infinite inventor, **Oboadee**, creator, fashioner, former, builder (**Osiadan**), excavator, and grand Architect (**Borebore**) of the Universe. **Odomankoma Oboadee** is the builder, and his creation is considered a construction framework within which he places all of his creations. Much like the description of the creation story of **Ptah**, it is said that **Odomankoma Oboadee**, an earth deity, is the divine craftsman who created the universe working with his **Mind** and **Hands**, and represents **Creative Intelligence**. Traditional Akan beliefs establish significant relationships between The Creator, his creations, and the Akan people. The Akan believe the creator puts his creativity into the Soul (**Kra**) of people, so Human Creations are just as much a part of Nature as "Natural" creations.



Odomankoma Oboadee - Creator and Grand Architect of the Universe in Akan culture

The creator acts through the creativity of Humans and continues to create. Therefore, Akan people make it their responsibility to use their Creative Energies to affect Nature and the Universe in the best way possible for the past, present, and future. This philosophy of the union of Human Creations to natural creation is shown in the **Akan Adinkra** symbol called **Abode Santaan**, the “all Seeing Eye of the Divine Creator” and symbol of the “totality of the universe”, which is the West African version of the Egyptian **Eye of Ra** – a symbol representing creativity.



ABODE SANTAAN

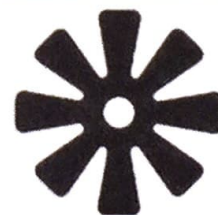
Symbol of the union of Natural and Human Creations. The symbol incorporates the eye, the rays of the sun, the double crescent moon, and the stool. The sun, the moon, and the eyes depict natural creation and the stool depicts Human Creation

The Akan also recognize **Ananse Kokuroko**, the Great Spider, as a deity of Wisdom and **Great Designer** who **weaves** a **web of energy** that permeates throughout all of creation. It is said in traditional Akan culture that Ananse the spider is messenger of the Supreme Being **Nyame** and owns all of the “stories” or wisdom, and brought wisdom and the craft of **weaving** to the Akan people. The Akan Adinkra symbol called **Ananse Ntontan (Spider's Web)** represents creativity, craftiness, and intelligence.



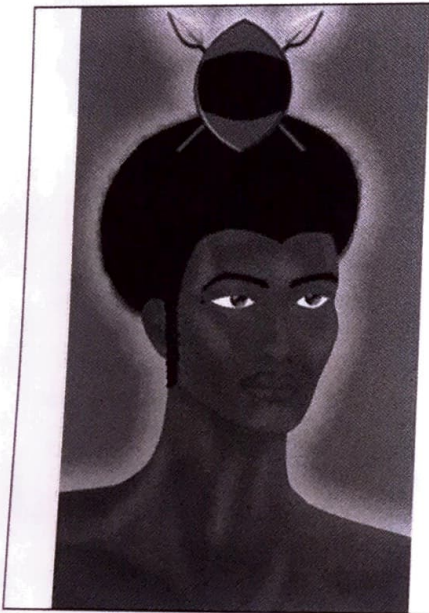
Ananse Kokuroko

Akan Creation god of Technology called the Crafty Weaver, and Wise Great Designer

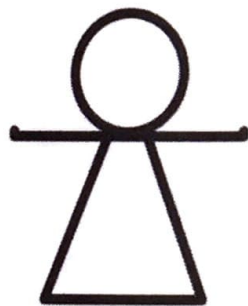


Left: Ananse Ntontan (spider's web), Akan Adinkra symbol for creativity, craftiness, and intelligence

In the Akan culture, it is said that the Spider or Anansi weaving a web was the inspiration for the weaving of the famous **Kente cloth** designs. The function of **Ananse** as the "**weaver**" in West African Akan culture was carried out by the creation Goddess **Neith** in Ancient Egyptian culture whose name means "**weaver**" or "Knitter" or "Netter" and was symbolized by a hieroglyphic symbol of a weaver's loom. Neith was also a deity of **war** and **hunting** who was depicted with a shield with two crossed spears over head because she was considered responsible for making the **weapons of warriors**. Neith was associated with the North African fertility Goddess **Ta-nit** whose symbol was a version of the **Ankh**, and Neith is associated with the Greek **Athena** and Roman **Minerva** or **Menrfa** which is derived from the Egyptian city **Men-Nefer**.



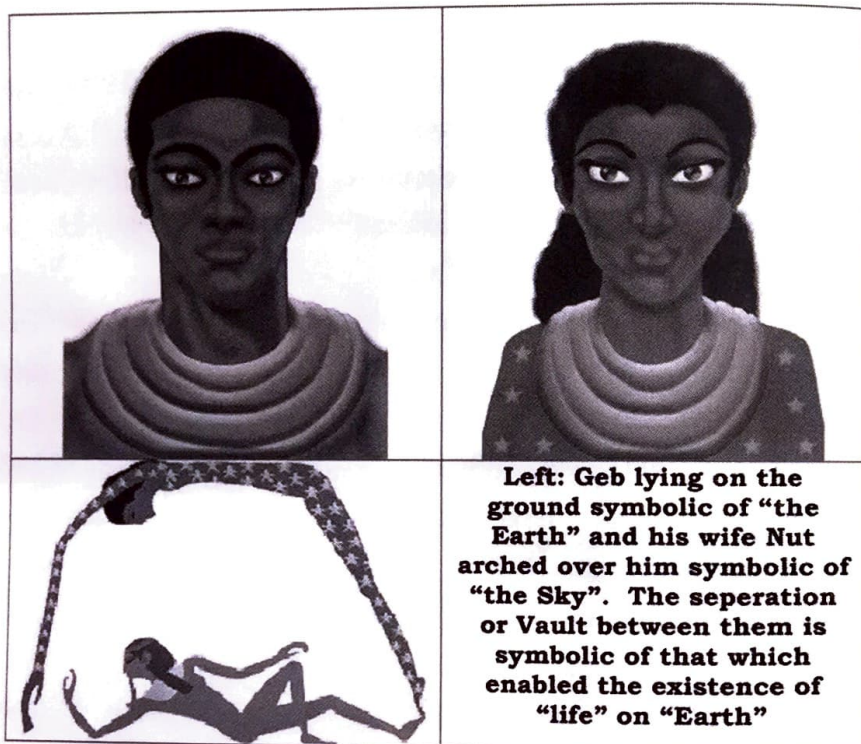
Left: African Creation Goddess Neith "The Weaver" sometimes called Bin-Ptah "Daughter of Ptah" Depicted with a Shield with Crossed spears Above her head



Above: Ankh symbol of Ta-Neith

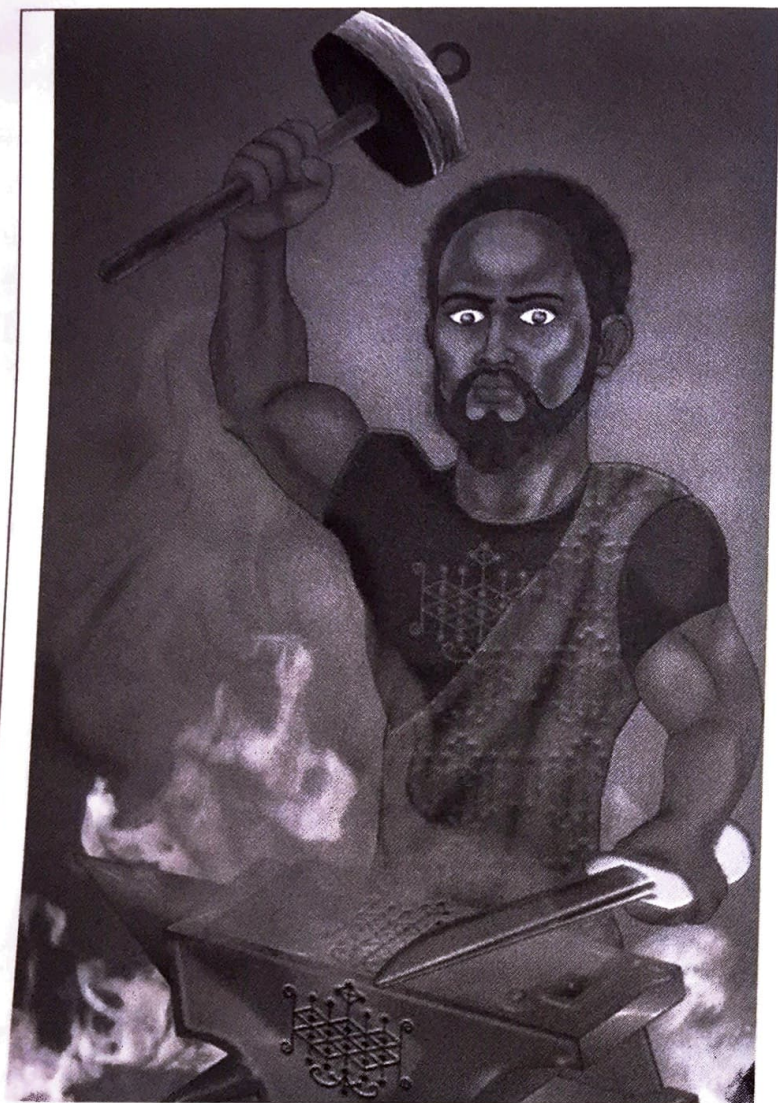
The oral tradition of most West African tribes says that they migrated to Western Africa from the area that is present day Egypt, Sudan, and Ethiopia. So, it is not surprising that many of the cultural and religious practices of West African tribes are similar to that of the Ancient Egyptians because in fact they were one of the many races and groups of people that made up the group called "the Ancient Egyptians". Ancient Egypt, the culture as a whole, was a **melting pot** of a variety of cultures and races of people, namely African and Mesopotamian, and much later European to name a few. In Ancient Egypt, as cultures and languages merged, traditional cultural religious practices and names for deities merged as well. The African deities **Ptah** and **Sokar** who were gods of creation intelligence, technology, craftsmen, blacksmiths, and tools for war, eventually merged with one another, and are similar to the Mesopotamian deity named **Enki** (also Enqi or Engi) who was also considered a deity of intelligence, creation, craftsmen, blacksmiths, and war. The name Enki (Enqi, Engi) means "Master of the Earth" with "En" meaning "master" and Ki, Qi, or Gi meaning "Earth", and is equivalent to the title "**Neb Ptah**" with "Neb" meaning "master" and "Ptah" meaning "Earth". As African tribes migrated from the area of Ancient Egypt to present day West Africa, the deity **Ptah**, **En-Gi** or simply Gi as a Earth deity of blacksmiths and Craftsmen became called Gi, Ga, and **Gu** as the "*spirit of the God of Iron, Blacksmiths and technology*". **Gu** is also similar in tone to the creative tone of Ptah called **Hu**, and another Egyptian Earth deity **Geb**. Geb

was the Ancient African deity who, along with his wife **Nut**, was part of the nine deities that made up the group called the Ennead or **Sa-Djed** in Egypt. Geb represented the Earth (TA), while Geb's wife Nut represented the sky. Geb and Nut were depicted in art in a metaphorical "sex act" with Geb lying on the ground representing the Earth, and Nut stretched over him representing the sky. The **Vault** or separation between Geb and Nut represented that which enabled and created the existence of "life" on "Earth". The ancient Africans applied the science and art of "sex" beyond the physical act.



Because the science, art, and technology of Metallurgy were essential to the **survival**, well-being, and quality of **life** of the various African tribes, blacksmiths were respected and feared for their "magical" (engineering) skills and abilities. Tribes such as the Mande and Bamana (**Segou**) of Mali, the Nok, Ife, Oyo and Yoruba people of Benin and Nigeria believe the blacksmith has the ability to manifest the spirit of **Gu** (Ptah). The Yoruba refer to Gu as O-gu or **Ogun**, where the "O" means "master", thus the name is equivalent in definition to "**En-gi**" and "**Neb Ptah**" - "**master of the Earth**". For the Dogon people of Mali, **Ogo** was one of four sets of twins created by the deity named **Amma** who was "**self-willed**" and was able to create his own world just like Amma. The world which Ogo created is said to be Earth, thus Ogo is called the "master of the Earth" (Neb Ptah in Egypt and En-Gi in Mesopotamia).

Ogun is part of the Yoruba West African Vodoun orisha pantheon. It is said that Gu means "survival" or "medicine" (a means to survive and vitality), and this is because it was necessary for Craftsmen or blacksmith to make tools that were needed for survival. The tools forged by the blacksmith were used for planting and harvesting crops, hunting, and if necessary, creating weapons for protection - which is why Ogun is associated with aggressiveness and war (**Guns**) - competition for natural resources. In the Yoruba Orisha pantheon system, the aggressiveness and creativity of Ogun is controlled by the Orisha of Wisdom **Orun-mila**.



GU or Gun or Ogun
"Master of the Earth"
African Creation God of Craftsmen and Blacksmith

In the Yoruba pantheon, Ogun is brothers with **Shango** (also spelled **Chango** or **Xango**, also known as **Ja-ku-ta**), a god of **Thunder, Lightning**, Vitality, and strategy often depicted wearing red and white and wielding a two-sided axe which is a variant of Ptah's Djed-Ankh-Waas tool just like Ogun's hammer.



Above: Shango or Chango or Shan-gu



Various Tools of the African Creation Gods of Technology

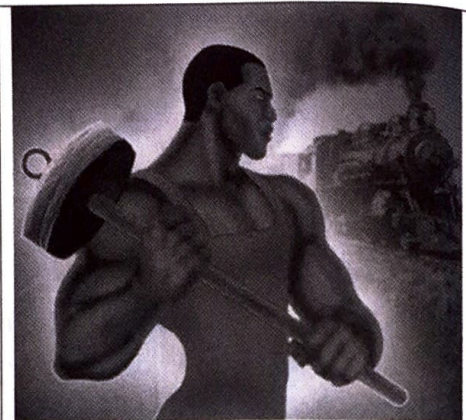
For the **Fon** and **Dahomey** tribes of West Africa, **Gu**, the god of tools, workshops, and blacksmiths, is the son of the creator deities **Mawu** (the female Moon) and **Lisa** (the male Sun). There is also an association between the name "Ptah" with the name of another Orisha Earth deity "**Saka-Pata**" (also called "Babalu Aye") and Ptah's association with Gu having to do with creating and developing things needed for "survival and well being" or "**medicine**" and healing and "**curing diseases**". For the **Ga** tribe of West Africa, **Gua** is the god of thunder, blacksmiths, and farmers with temples located in the forges and workshops of blacksmiths. The word "Forge" shares the same etymological origin as the word "**Fabric**", a **woven** material, which again shows the association between the weaver and the blacksmith. It is within the forges and workshops of blacksmiths where elements are melted and combined in **melting pots** and furnaces, and then shaped and **molded** into the desired new creations. The **Dogon** tribe in Mali is renowned as talented blacksmiths throughout Africa and the name Ogon (Ogun or Gu) can even be found in the tribal name of the D-ogon which is similar to the **earth** deity worshiped by Semitic peoples named **Dagon**. The name of the country of **Ghana**, which was named after the ancient **Ghana** Empire (formally the **Wa-ga-dou** Empire), means "warrior king", from the words Gha or Ga (Gu) in reference to the blacksmith "**Iron Man**" warrior energy "Gu", and na or nana, the Akan word for "Ancestor or king". **Gao** was the capital city of the **Songhay** empire which derived from the older Ghana

empire. The Greeks called the earth deity **Gu** by the female name **Gaia** or **Gaea** or **Gea** or **Geo** as in **Geology** and **Geometry**, and the Romans called the earth deity **Ptah** or **Ta** by the female name **Terra**. Even freemasons recognize **G.A.U.** as the **Grand Architect** of the **Universe**. For the **Bwiti** religion in **Zaire**, **Gabon**, **Cameroon**, and **Congo**, the father of the Human race and God of Metalwork, Ironmongery, arts, and crafts is a deity named **None** (also called None-Mebeghe) who is the brother of the female goddess of fertility responsible for holding up the world named **Ninepone**. The blacksmith deity **None** of the Bwiti religion is similar in pronunciation and function to the ancient Egyptian deity **Nun** who along with his female counterpart **Naunet** was combined with the blacksmith deity **Ptah** as written on the **Shabaka Stone** in the Memphite Theology as **Ptah-Nun** "*the father who made Atum*" and **Ptah-Naunet**, "*the mother who bore Atum*". To the **Fula** or **Fulani** people of West and Central Africa, **Nun-fari** (also called "Baylo" or "Waylude" meaning "**transformer**") is the deity considered the Ancestor of all Blacksmiths who mastered the spirit of three fires: Wood Fire, Earth Fire, and Heavenly Fire. Blacksmiths amongst the Fulani are considered "**First Son of the Earth**" ("Sons of Ptah" by definition).

Even during the bondage and oppression of slavery in America, Africans continued the practice the art of deifying and honoring the blacksmith "sons of Ptah". **John Henry** was an African-American born in the state of West Virginia during the time of slavery in America and was said to have been "the

strongest man alive” and able to **forge** steel faster than a mechanical steam-powered hammer.

The blacksmith ability of John Henry has been honored in folk songs, statues, story books, television shows, and movies. Since his death, the legends and myths surrounding John Henry have continued to grow.



**John Henry “Steel Driving Man”
Black American Folk Hero**

Studying and observing nature, then using and applying the information obtained while studying Nature and making use of natural resources, mastering the Earth, elements, clay, ground, chemicals, and substances of nature not just limited to Iron, metal, tools, gadgets and/or gismos but applying any and all knowledge obtainable to Create things necessary for survival, well-being, and quality of life – these are the general characteristics of a “God” of technology in the religious sense, and the reality of the various Inventors, engineers, scientist, technologist, and craftsmen that have existed throughout history. Gods of technology and creation are usually never satisfied with their creations, and thus always seek to “perfect their craft”, thus, creation is an ongoing cycle. In the religious sense, “Gods” of technology serve as Healers, Providers, Sustainers, Protectors, and mediums between Nature’s Natural resources to the rest of humanity.

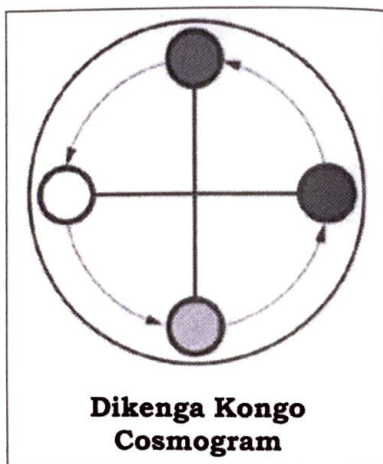
3. APPLIED AFRICAN ALCHEMY AND ELECTRO-CHEMISTRY

Traditionally in Africa the Blacksmiths, or “Suns of Ptah”, were the individuals in the community that had knowledge of the minerals and elements of the Earth and nature. Whether the elements were combined to make medicines for Healing, or combined in Metallurgy processes to make tools and buildings, the application of this knowledge was and is paramount to survival and well-being. This is why **Imhotep** and other “Suns of Ptah” were a **Builders, Architects, Physicians, and Healers**. In ancient times in Africa, two of the sciences that were used were called **Alchemy** and **Geomancy**. The earliest written evidence of Alchemy is from 3,000 BC in Egypt. Alchemy deals with the art of transmuting different elements and metals, metallurgy, philosophy, astrology, astronomy, mysticism and medicine. Geomancy deals with “divine” interpretation of the features of the Earth, rocks, soil, sand, and other minerals and elements. Speculative Geomancy eventually led to modern Geomancy divination practices, whereas Operative active Geomancy eventually led to the development of modern **Geology**. Geology is the scientific study of the composition, structure, and physical properties of the **matter** that makes up the Earth (Ptah) and also includes the study of the history of Earth materials, and the processes by which they form, move, and change. In its speculative form, Alchemy deals with achieving “Ultimate Wisdom” and turning metaphorical “base matter” into “gold” (called creating the

"**philosopher's stone**", which was considered useful for rejuvenation and achieving immortality). This process of creating the philosopher's stone was/is called the **Magnum Opus** or "Great Work" and had four stages:

- * **Black** - change, dissolution, individuation
- * **White** - burnout of impurity; the moon, female
- * **Yellow** - enlightenment; the sun, male;
- * **Red** - unity of the finite with the infinite

These four stages of the Magnum Opus can be seen in the African Cosmogram of the Kongo called the **Dikenga**. The Dikenga Cosmogram illustrates various cycles of the natural universe. On the large scale or **Macroscopic** level (celestial), the Dikenga Cosmogram depicted **Astronomical** cycles in nature,



Dikenga Kongo Cosmogram

and following the ancient African philosophy, "**As Above, So Below**," on the small scale or **Microscopic** level (terrestrial or atomic), the Dikenga Cosmogram depicted **Atomic** cycles in Nature. In Operative African Alchemy, modern Chemistry, and Physics, the cyclic changes and flow of Energy in nature is known as **Thermodynamics**. In its Operative form, Alchemy eventually led to the development of modern **Chemistry**. The

word Alchemy and Chemistry is derived from the word **Chemi** or **Khemi** or **Khemet (KMT)**, meaning "**Black Land**", which was one of the names of Ancient Egypt. Chemistry is the science of the composition, behavior, structure, and properties of matter, as well as the changes it undergoes during chemical reactions. Egyptian Alchemist developed theories about the elements of Nature and personified them in the Egyptian pantheon of Deities and various cosmology stories. The ninety deities of the Egyptian Alchemical pantheon are equal in number to the Ninety Naturally occurring elements in Nature on the **Periodic table**.

Just as in ancient African Alchemy, Nature was observed, and the personification of aspects or elements of nature led to the development of the Egyptian pantheon, in modern Chemistry, the matter or material of Nature is studied and observed which led to the development of the periodic table. The investigation of the matter and material of nature begins with Geology as well as **Mineralogy** and **Herbology**, and the classification of elements, nutrients, minerals, and **chemical substances and compounds**. Further analysis leads to the Atomic level and **smallest particles of matter** where each element of the periodic table is a pure chemical substance indicating a particular form and type of Atom.

Geology classifies and Identifies the minerals, Elements, and compounds of the Earth that are extracted via the Mining process, before further analysis of their chemical composition in Chemistry

Mineral Color is Influenced By the Elements It Contains	
Mineral Color	Selected Elements
RED	Iron, Mercury
ORANGE	Iron, Mercury
YELLOW	Iron, Uranium, Gold
GREEN	Iron, Copper, Cobalt, Chromium, Uranium, Nickel
BLUE	Copper, Manganese, Cobalt, Chromium
VIOLET	Manganese, Iron
PURPLE	Manganese, Iron
BROWN	Iron, Uranium, Copper, Nickel, Mercury
BLACK	Manganese, Carbon, Iron, Lead
GRAY	Silicon, Silver, Platinum, Lead, Zinc, Aluminum
WHITE	Silicon, Gold

TABLE OF 90 EGYPTIAN DEITIES

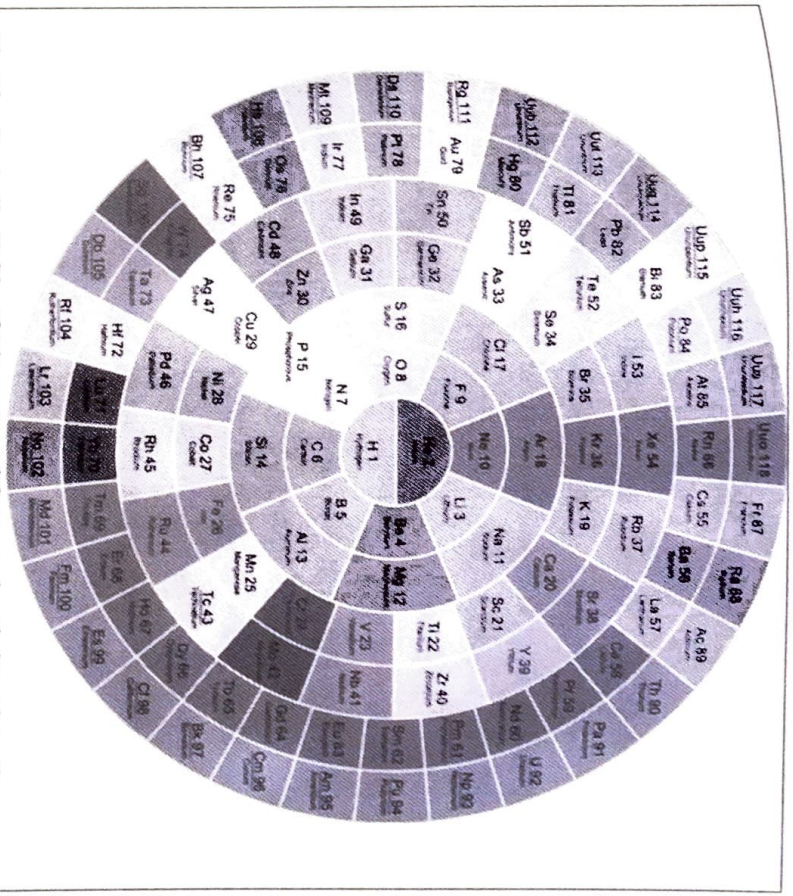
1	PTAH	2	NUB	3	NUBET	4	HEH	5	HEHET	6	KEK	7	KEKET	8	AMUN	9	AMUNET	10	ATUM	11	ATUM	12	TEPHUT	13	SUTAH	14	NUT	15	ASET	16	ASARU	17	NESTNET	18	NESTNET	19	MAHUT	20	MAHUT	21	MAHUT	22	MAHUT	23	MAHUT	24	MAHUT	25	MAHUT	26	MAHUT	27	MAHUT	28	MAHUT	29	MAHUT	30	MAHUT	31	MAHUT	32	MAHUT	33	MAHUT	34	MAHUT	35	MAHUT	36	MAHUT	37	MAHUT	38	MAHUT	39	MAHUT	40	MAHUT	41	MAHUT	42	MAHUT	43	MAHUT	44	MAHUT	45	MAHUT	46	MAHUT	47	MAHUT	48	MAHUT	49	MAHUT	50	MAHUT	51	MAHUT	52	MAHUT	53	MAHUT	54	MAHUT	55	MAHUT	56	MAHUT	57	MAHUT	58	MAHUT	59	MAHUT	60	MAHUT	61	MAHUT	62	MAHUT	63	MAHUT	64	MAHUT	65	MAHUT	66	MAHUT	67	MAHUT	68	MAHUT	69	MAHUT	70	MAHUT	71	MAHUT	72	MAHUT	73	MAHUT	74	MAHUT	75	MAHUT	76	MAHUT	77	MAHUT	78	MAHUT	79	MAHUT	80	MAHUT	81	MAHUT	82	MAHUT	83	MAHUT	84	MAHUT	85	MAHUT	86	MAHUT	87	MAHUT	88	MAHUT	89	MAHUT	90	MAHUT
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hydrogen 1 H 1.0079																	helium 2 He 4.0026						
lithium 3 Li 6.941	beryllium 4 Be 9.0122																	boron 5 B 10.811	carbon 6 C 12.011	nitrogen 7 N 14.007	oxygen 8 O 15.999	fluorine 9 F 18.998	neon 10 Ne 20.180
sodium 11 Na 22.990	magnesium 12 Mg 24.305																	aluminum 13 Al 26.982	silicon 14 Si 28.086	phosphorus 15 P 30.974	sulfur 16 S 32.065	chlorine 17 Cl 35.453	argon 18 Ar 39.948
potassium 19 K 39.098	calcium 20 Ca 40.078	scandium 21 Sc 44.956	titanium 22 Ti 47.867	vanadium 23 V 50.942	chromium 24 Cr 51.996	manganese 25 Mn 54.938	iron 26 Fe 55.845	cobalt 27 Co 58.933	nickel 28 Ni 58.693	copper 29 Cu 63.546	zinc 30 Zn 65.39	gallium 31 Ga 69.723	germanium 32 Ge 72.61	arsenic 33 As 74.922	selenium 34 Se 78.96	bromine 35 Br 79.904	krypton 36 Kr 83.80						
rubidium 37 Rb 85.468	strontium 38 Sr 87.62	yttrium 39 Y 88.906	zirconium 40 Zr 91.224	niobium 41 Nb 92.906	molybdenum 42 Mo 95.94	technetium 43 Tc [98]	ruthenium 44 Ru 101.07	rhodium 45 Rh 102.91	palladium 46 Pd 106.42	silver 47 Ag 107.87	cadmium 48 Cd 112.41	indium 49 In 114.82	tin 50 Sn 118.71	antimony 51 Sb 121.76	tellurium 52 Te 127.60	iodine 53 I 126.90	xenon 54 Xe 131.29						
cesium 55 Cs 132.91	barium 56 Ba 137.33	57-70 *		lanthanum 57 La 138.91	cerium 58 Ce 140.12	praseodymium 59 Pr 140.91	neodymium 60 Nd 144.24	promethium 61 Pm [145]	samarium 62 Sm 150.36	europium 63 Eu 151.96	gadolinium 64 Gd 157.25	terbium 65 Tb 158.93	dysprosium 66 Dy 162.50	holmium 67 Ho 164.93	erbium 68 Er 167.26	thulium 69 Tm 168.93	ytterbium 70 Yb 173.04						
francium 87 Fr [223]	actinium 89 Ac [227]	89-102 * *		thorium 90 Th [232]	protactinium 91 Pa [231]	uranium 92 U [238]	neptunium 93 Np [237]	plutonium 94 Pu [244]	americium 95 Am [243]	curium 96 Cm [247]	berkelium 97 Bk [247]	californium 98 Cf [251]	americium 99 Es [252]	fermium 100 Fm [257]	mendelevium 101 Md [258]	nobelium 102 No [259]	lawrencium 103 Lr [262]						
				rutherfordium 104 Rf [261]	dubnium 105 Db [262]	seaborgium 106 Sg [266]	bohrium 107 Bh [264]	hassium 108 Hs [270]	meitnerium 109 Mt [269]	darmstadtium 110 Ds [271]	roentgenium 111 Uuh [272]	copernicium 112 Uub [277]	unbinilium 114 Uuq [286]										

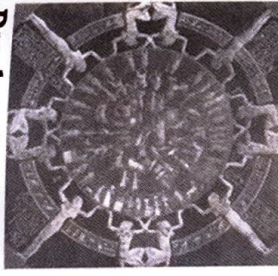
* Lanthanide series

** Actinide series

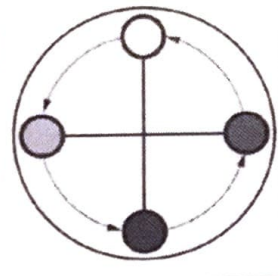
Above: Periodic Table of the Elements



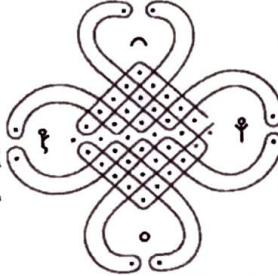
Circular Periodic Table of Elements with seven levels based on the seven electron shells. Modeled after the Mayan Calendar Cosmogram which shares similarities to many African Cosmograms. Source: www.mayanperiodic.com



Dendera Egyptian Cosmogram



Dikenga Kongo Cosmogram



Lusona Chokwe Cosmogram

The application of African Alchemy in modern Chemistry and **Chemical Engineering** has many purposes, but perhaps the field of Chemistry that has had the greatest impact on modern technological development is the field of **Electro-Chemistry** which makes Electricity and Electrical Power and Energy possible. Electro-Chemistry is a branch of chemistry that studies the chemical reactions which occur when **Electrons** in an Atom are transferred between materials. An **Electro-Chemical Reaction** is either the creation of Electrical Voltage by a Chemical Reaction (i.e. an **Electro-Chemical Cell**), or the creation of a Chemical Reaction by a voltage (i.e. **Electrolysis**). The following terms in applied African Alchemy and Electro-Chemistry are defined to facilitate comprehension of the Natural phenomenon that take place when generating Electrical Power and Energy:

- **Electrons** are subatomic particles that are one of the smallest particles of matter and have an opposite charge to that of the proton particles in the atom's nucleus. Electrons are usually considered to have a Negative charge. Electrons orbit outside of the Atom's nucleus. The antimatter counterpart to the electron is called the Positron. The movement and flow of electrons determine phenomenon such as **Electric Charge**, **Electricity** and **Magnetism**. **Oxidation** is the loss of electrons, and **Reduction** is the gain of electrons during an Electro-Chemical reaction.

- **Conductors** are materials that contain moveable electrons. The table at the end of this chapter lists some elements that are conductors.
- **Semi-Conductors** are materials that have electrical conductivity that is less than a Conductor, but greater than an Insulator. The table at the end of this chapter lists some elements and materials that are semi-conductors.
- **Super Conductors** are materials that at very low temperatures have an infinite electrical conductivity. Superconductivity occurs in many materials such as elements like tin and aluminum, various metallic alloys, and semi-conductors. Superconductivity does not occur in metals like gold and silver, or in ferromagnetic metals. One of the applications of superconductors is the ability to levitate magnets.
- **Insulators** (also called **Dielectric**) are materials that do not readily allow the free flow of electrons. The table at the end of this chapter lists some elements and materials that are insulators.
- **Ion** is an atom where the total number of Electrons does not equal the total number of protons, giving it a positive or negative charge. When there are more

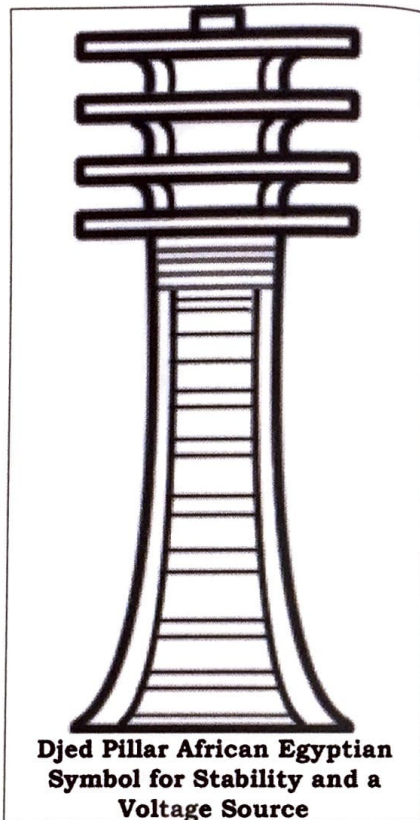
electrons than protons it is called an **An-ion** and has a negative charge. When there are more protons than electrons, it is called a **Cat-ion** and has a positive charge.

- **Electrolytes** are solid, liquid, or gas substances that contain ions that make the substance electrically conductive. Most electrolytes are ionic solutions of acids, bases, or salts. The table at the end of this chapter lists some elements and materials that are electrolytes.
- **Electrolysis** is when an electric current or electrical energy is used to cause a chemical reaction where chemical compounds decompose or separate into elements. Electrolysis can cause separation and decomposition of water into the elements hydrogen and oxygen (for **hydrogen fuel cells**), and also enables Electroplating to coat conductive metals with a thin layer of material. The process of combining elements into compounds using electrical energy is called **reverse electrolysis**.

	Material	Electrical Conductivity (S·m ⁻¹)	Magnetic	Alchemy Symbol
CONDUCTORS	Silver (Ag)	63,000,000	Diamagnetic	☾
	Copper (Cu)	59,600,000	Diamagnetic	♀
	Gold (Au)	45,200,000	Diamagnetic	☉
	Aluminum (Al)	37,800,000	Paramagnetic	♂
	Calcium (Ca)	29,800,000	Diamagnetic	☉
	Tungsten (W)	17,900,000	Paramagnetic	
	Cobalt (Co)	17,200,000	Ferromagnetic	♀
	Zinc (Zn)	16,600,000	Diamagnetic	♂
	Nickel (Ni)	14,300,000	Ferromagnetic	♂
	Iron (Fe)	10,300,000	Ferromagnetic	♂
	Platinum (Pt)	9,430,000	Paramagnetic	☉
	Tin (Sn)	9,170,000	Paramagnetic	♂
	Lead (Pb)	4,500,000	Diamagnetic	♂
	Mercury (Hg)	1,000,000	Diamagnetic	♀
SEMI-CONDUCTORS	Carbon (C)	30,000	Diamagnetic	☉
	Sea water	4.8	Diamagnetic	▽
	Germanium (Ge)	1	Diamagnetic	
	Silicon (Si)	0.001	Diamagnetic	☉
	Drinking water	0.0005		▽
	De-ionized water	0.0000055		▽
INSULATORS	Ceramic	0.000000001		
	Glass	1E-10		
	Plastic	1E-11		
	Rubber	1E-13		
	Air	3E-14		△
	Wood	1E-16		
	Quartz	1.3E-18		
	Teflon	1.3E-23		

4. THE DJED PILLAR AND VOLTAGE

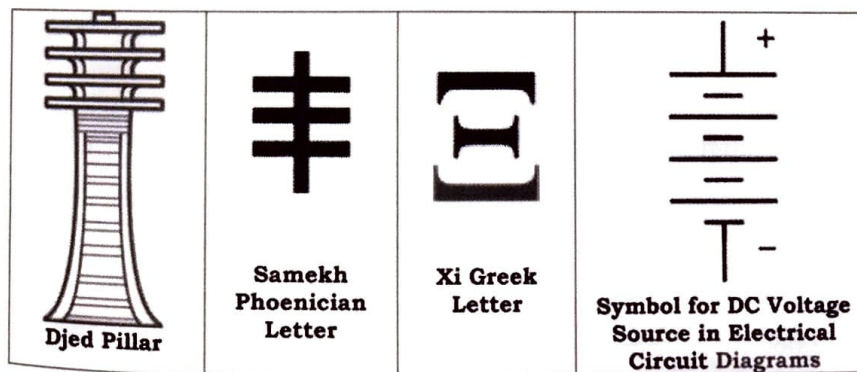
The **Djed** (also spelled Zed or Sed) Pillar is an Ancient African Egyptian symbol which is said to represent "Stability". The Djed Pillar is shown as a column with four parallel horizontal bars across the top. The three empty spaces formed by the four Horizontal bars are said to symbolically represent **Hu**, **Heka**, and **Sia** which are Ancient African Egyptian concepts of **Creativity**, **Engineering**, and **Insight** respectively. The Djed pillar was originally associated with



the African Egyptian Creation Deity Ptah, who was called "**The Noble Djed**". As Ptah became combined with Sokar and Osiris, the Djed pillar became considered the "**backbone**" of the Egyptian deity Osiris, the God of the Underworld. The Djed was raised during certain ceremonies by the new ruler in the city of Djedu (which was named after the Djed pillar) as a symbol of "**Potency**" or "**Power**" and resurrection of Osiris, and is somewhat similar to the **Obelisk** in this regard. The symbol

for the Djed pillar is also thought to have derived from the base of a Bull's (Taurus or Ptah-Apis) **spine**, and when shown in conjunction with the Ankh and Waas symbols, indicated a flow of potent or powerful **life giving fluid (semen or electricity)** within the body of the Bull – this is analogous to the flow of Electricity throughout these three electrical components as will be shown later in the section on "Ptah's Law of Electricity". The Djed pillar as a symbol of "**Stability**" can be constructed as a source of constant or "**Stable**" **DC Voltage**.

The Djed symbol is the origin of the Phoenician letter Samekh (𐤌) and the Greek letter Xi (Ξ). In Chemical Engineering Kinetics, the lower-case Greek letter Xi (ξ) (or Djed) is used as a symbol to indicate the measurement of a Chemical reaction (called **Stoichimetry**). The Djed as a symbol of "stability" or "equivalence" is also the origin of the Mathematical sign for Equivalence (=). In fact, the Djed symbol is currently used as the symbol for DC Voltage sources in electrical circuit diagrams and schematics.



In the book entitled "**The Ankh, African Origin of Electromagnetism**" on page 30, the writer Nur Ankh Amen describes how "Alessandro Volta" (the European who is credited by Europeans as having developed the first European electric cell) acquired knowledge of how to come up with the "Voltaic Pile Battery" after discovering a Djed pillar battery while pillaging and invading African Egyptian relics:

"In 1798 Napoleon recruited 167 scientist and technicians to accompany the French fleet in the conquest of Egypt. And in 1801 Volta, the so-called discoverer of the pile or battery, was given a medal and a pension by Napoleon for his contribution...Volta's discovery of the principles by which the Djed produced a stable electrical current, is considered to be the greatest invention of the 19th Century."

The construction of a Djed pillar as a Pile battery DC voltage source involves the application of the **Electro-Chemistry (Electro- Khemet-Mystery)** properties of elements and metals to construct an **Electro-Chemical cell**. In Ancient Africa, the **Blacksmiths** were the scientist and craftsmen with knowledge of Elements, Metallurgy, and Metals, and the African creation Deity **Ptah** was said to be the God of Blacksmiths and technology – this shows the relationship between Ptah, Blacksmiths, and the construction of Electronic components in

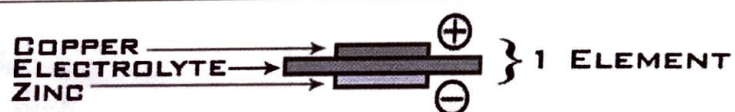
Ancient Africa. An **electro-Chemical cell** is capable of either obtaining Electrical energy from chemical reactions, or causing Chemical Reactions from Electrical Energy. There are two kinds of electrochemical cells:

- **Primary Electrochemical Cells** which transform chemical energy into electrical energy by chemical reactions that cannot be reversed.
- **Secondary Electrochemical Cells** which transform chemical energy into electrical energy by chemical reactions that can be reversed, and thus are called "rechargeable" batteries.

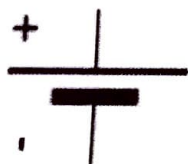
The Electrochemical cell consists of two different types of metals, (usually but not always the "Transition Metals" from the periodic table of elements) separated by an **Electrolyte** substance. An **Electrolyte** is a substance that is electrically conductive since it contains free **Ions** (an Ion is an atom or molecule that does not have the same number of electrons as protons and therefore has positive or negative electrical charge). The **separation** of the two metals by the electrolyte creates a **Vault** or space where there is a potential difference and enables the flow of electrical charge. The Arabic word for "separation" or "division" which is the cause of the physical phenomenon called **Voltage** or "Potential Difference" is **Faraqa**, and it has been suggested that the word **Faraqa** is a

possible root of the word **Africa**. If this suggestion is accurate, then the implication is that "**Africa (separation) of Metal by an Electrolyte is the cause of the Natural physical phenomenon known as Voltage**".

The Electrochemical Cell would correspond to a single horizontal bar on the Djed Pillar, and the **pilling** or stacking (connecting the Electrochemical cells in **Series**) of four Electrochemical Cells would construct a Djed Pillar Pile Battery as commonly depicted on the walls of the various buildings found throughout Egypt in Africa. Pilling, Stacking, or connecting the Electrochemical cells in series increases the Voltage across the overall component, and therefore, the Voltage of the Djed Pillar Pile Battery can be increased by pilling more Electrochemical cells.



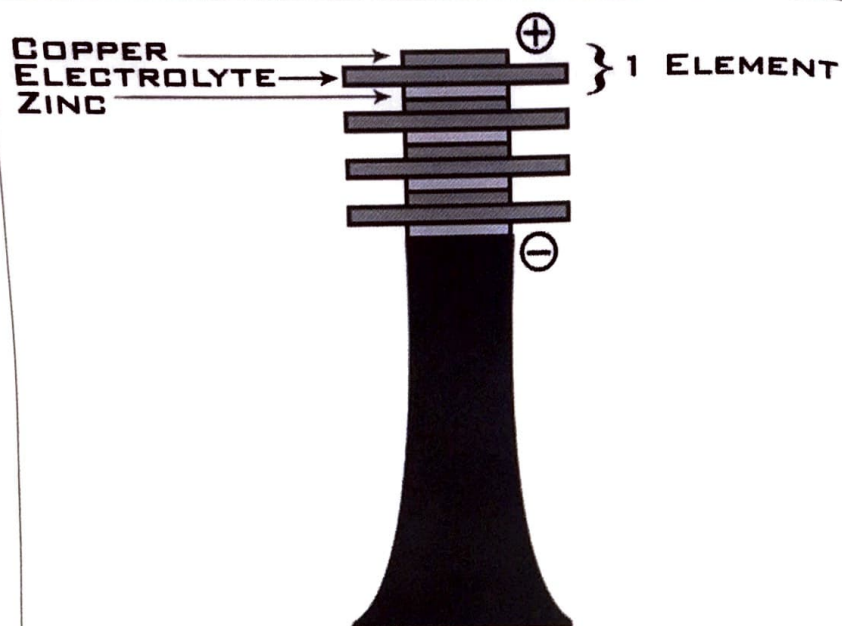
Above: An Electro-chemical cell using a Copper Cathode and Zinc Anode separated by an Electrolyte would correspond to one Horizontal bar of the Djed Pillar Pile Battery



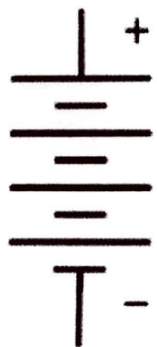
Left: The corresponding Electrical schematic symbol for one Electrochemical cell

Although any two different metals can be used as the electrodes, the metal usually used for the Anode (Up or "flow in") is **Zinc** and the metal usually used for the Cathode (Down or "flow out") is **copper**. Manganese, Lithium, Mercury, silver, and Nickel are also commonly used metals for the Cathode by battery manufactures. **The sciences of Chemistry and Geology are extremely pertinent to be able to identify the needed elements (metals) and materials in nature.**

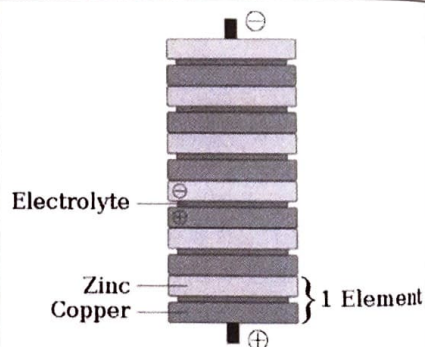
Cathode Metals	Anode Metals	Electrolyte	Voltage
Copper (Cu)	Zinc (Zn)	Brine, Acid, or Lye	1.1
Nickel (Ni)	Iron (Fe)	Lye (Potassium Hydroxide)	1.2
Nickel (Ni)	Cadmium (Cd)	Lye (Potassium Hydroxide)	1.2
Mercury (Hg)	Zinc (Zn)	Lye (Sodium hydroxide)	1.35
Silver (Ag)	Zinc (Zn)	Lye (Sodium hydroxide)	1.86



Above: Djed Pillar Pile Battery with 4 electro-chemical cells using a copper cathode and zinc anode. This configuration should produce approximately 4 volts, and the voltage can be improved by using different metals and electrolytes.

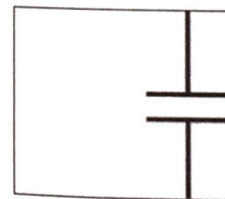


Above: The corresponding Electrical schematic symbol for a Battery Voltage source of 4 Electrochemical cells



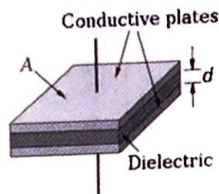
Above: A Copper-Zinc Voltaic Pile inspired by the Djed Pillar pile battery

The Djed Pillar can be constructed as a voltage source in the form of a "Djed Pillar Pile Battery", or as a Voltage storage device in the form of a **Capacitor**. A Capacitor is an electrical component consisting of a pair of conductor metals separated by an insulator (dielectric). A typical construction of a capacitor could include two Silver conductors (which is the best electrical conductor) separated by a small insulator (dielectric) such as paper, plastic, glass, or ceramic. When an electrical voltage is applied across the conductor metals of the Capacitor, an electric field is generated in the insulator between the conductors, and this electric field has the ability to store electrical energy. Capacitors are named "capacitor" because of their "Capacity" or ability to store electrical energy. In addition to energy storage, capacitors are used as filters as well as in Radio Frequency electrical circuits. For 1 Volt applied across the Conductor metals of a Capacitor, the ability of the Capacitor to store Electric Charge is measured in **Farads** named for the European Physicist **Michael Faraday**. The amount of **electric charge** stored by a Capacitor of one Farad connected to a Voltage source of one volt is called a **Coulomb**, named after the European Physicist **Charles-Augustin de Coulomb**.



Left: The corresponding Electrical schematic symbol for a Capacitor

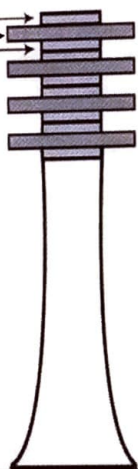
CONDUCTOR
INSULATOR (DIELECTRIC)
CONDUCTOR



} 1 CAPACITOR

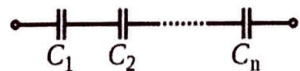
Above: A Capacitor electrical component using silver conductors separated by an Insulator (Dielectric) would correspond to one Horizontal bar of the Djed Column Capacitor

CONDUCTOR
INSULATOR (DIELECTRIC)
CONDUCTOR



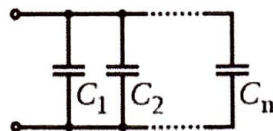
} 1 CAPACITOR

Left: Djed Column Capacitor with 4 Capacitors connected in Series. Capacitors are combined in series to achieve a higher working voltage and for smoothing a high voltage power supply. Series connection is also used for electrolytic capacitors, which use an ionic electrolyte solution as one of the conductors, for AC use



$$\frac{1}{C_{eq}} = \frac{1}{C_1} + \frac{1}{C_2} + \dots + \frac{1}{C_n}$$

Above: In Electrical Circuit Analysis, capacitors connected in Series, the entire series Capacitance acts as a capacitor smaller than any of its components

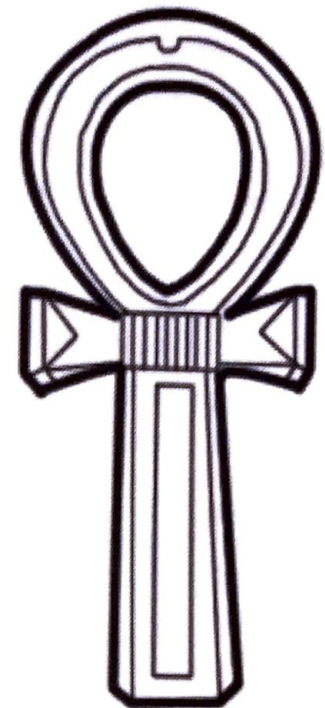


$$C_{eq} = C_1 + C_2 + \dots + C_n$$

Above: In Electrical Circuit Analysis, capacitors connected in Parallel have the same voltage across each one, and the overall capacitance adds up.

5. THE ANKH AND CURRENT

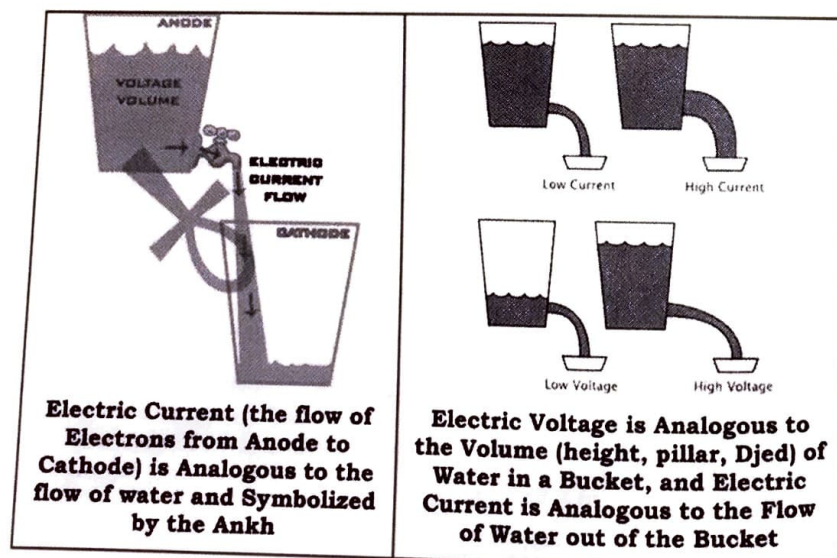
The **Ankh** is an Ancient African symbol called "The Key to Life", "eternal life", or "continuous life". The Ankh symbol is shown with a loop, coil, or circle "O" at the top united with a "T" or cross at the bottom which symbolized the unification of dual principles such as Male-Female, Life-Death, Circle-Square, Day-Night, Positive-Negative, etc. The Ankh symbol is modified from and associated with the Egyptian



ANKH: African Egyptian Symbol for "Eternal Life" and Electrical Current

Shen symbol which represented "Eternity" and the Egyptian **Sa** symbol which represented "Protection". The unification of Dual, yet opposite principles that the Ankh symbol portrays as a "key to life" is analogous in the field of Electro-Magnetism to the Dual, yet opposite Positive and Negative Electrical charges that serve as a "key to electricity". Some interpretations suggest that the top loop and horizontal cross of the Ankh symbol represent the Female womb and fallopian tubes in union with the male phallus represented by the Vertical bar at the bottom. This interpretation of the Ankh symbol, while

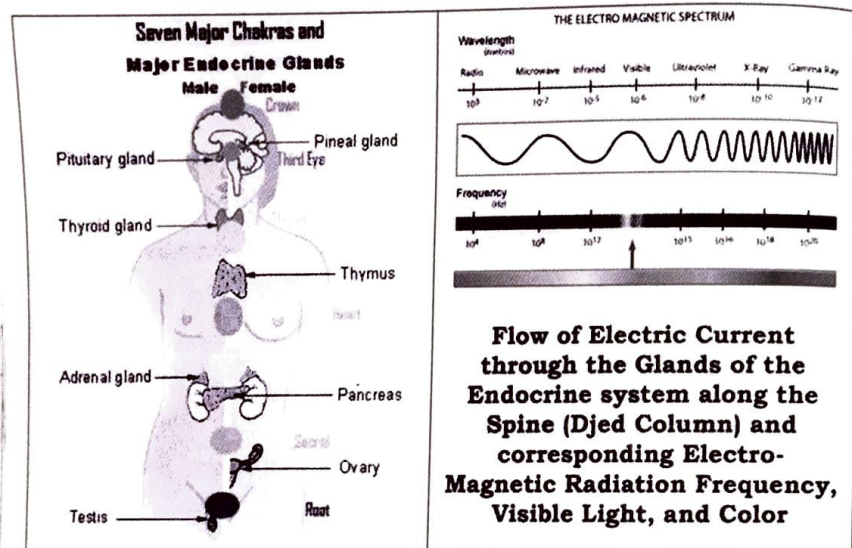
biological in description, actually further illustrates the relationship to the Ankh and Electrical current. In Alchemy, the Ankh symbol is the symbol for the element **Copper**, and when drawn in Ancient Egypt, Ankhs were always depicted as either Copper or Gold – two of the best Electrical Conductors. Moreover, the **flow of life giving fluid** (called **Semen**) from the Male Principle at the bottom to the Female principle at the top which is “**the key to human life**” in the Ankh’s Biological symbolism is analogous to the **flow of electrons** from the Anode to the Cathode which is the “**key to electricity**” in the Ankh’s Electro-Magnetic symbolism. The flow of electrons through a conductor is called **Electric Current**. Electric current is similar to **Water Current** in that it is the result of particles flowing from one point to another. This analogy can be seen when the **Amplitude** or Height of water in a bucket is **Ample** or large enough to determine the flow of water current out of the bucket.



In modern Electronics and Physics, the number of electrons that flows through a point in a conductor in one second is called an **Ampere**. The unit of measurement called the Ampere is named for the European scientist **André-Marie Ampère**, and 1 Ampere is approximately 6,242,000,000,000,000,000 electrons passing a point in the conductor in 1 second. The ability for a material to conduct electrical Current is called “Conductivity” and is measured in units called “**Siemens**” which is supposedly named for the European scientist called “**Ernst Werner von Siemens**”.

The intimate relationship between Life and Electricity that is symbolized by the Ankh can also be seen in the field of **Bio-Electro-Magnetism** and studying the Human Brain and **Central Nervous System**. Life and Human activity is made possible by Electricity when electrical cells called **Neurons** in the Human Brain and Spinal cord send Electro-Chemical signals to animate, activate, and control the various functions of the Human body. The flow of electricity throughout the Human body and the resulting electrical and magnetic fields in the nerves, cells, tissues, glands, and muscles is studied in the field called Bio-Electro-Magnetism. Oscillating Electrical and Magnetic fields is called **Electro-Magnetic Radiation** and Electro-Magnetic Radiation that Humans are able to see is called **Light** and the various frequencies determine **color**. This energy flow and **vitality** is called **Qi** in traditional Asian culture and is called **Prana** in Hindu culture which is

associated with the concept of **Aura** or **Chakras**. In Africa, this energy or power was known as **Sekhem** and as an aspect of the Egyptian Soul called the **KA** which was the electrical energy that determined if a body was living or dead.

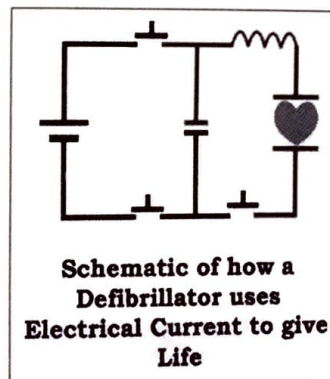


The flow of **Electrical current** through the Human body via the various **Burning of Nutrients** and **Minerals** consumed by eating and digestion in the different fluids and acids (battery acid, electrolytes) is what makes the body warm and enables life. The Interruption, cessation, or stoppage of the flow of Electrical Current in the Human body can lead to injury or death. The table below shows the Human Response to different levels of Electrical Current.

Electrical Current (A)	Human Reaction
0.001 - 0.01	The minimum current a human can feel. Electric Shock. Can cause fibrillation If the current has a direct pathway to the heart
0.01 - 0.06	Fibrillation of muscle fibers can occur. Stun
0.1	Lethal Fibrillation if they pass through sensitive portions of the body
0.2 - 0.7	Ventricular fibrillation in the Heart. Muscle contractions are so strong that the heart muscles cannot move at all. Can be lethal
> 1	Permanent damage via burns and cellular damage. Lethal
10	Electrocution. Used with the Electric Chair for Death Penalty

Fibrillation, which is the uncontrolled contraction of Muscle fibers, is the Electrical Current range that is used in weapons such as "**Stun Guns**" and "**Tasers**".

When the Fibrillation result of electrical current occurs near the Heart for a long enough amount of

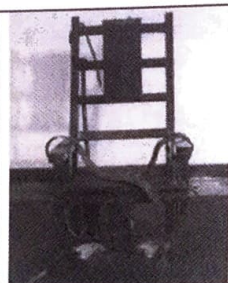


time, death can occur. However, Electrical Current can also reverse the process of fibrillation and resuscitate a person on the verge of death using a **Defibrillator**. Electricity is the cause of Life and can be the cause of death as is the case with **Electrocution**. Electricity and Technology also provides **Life Support Systems** for individuals who would otherwise be

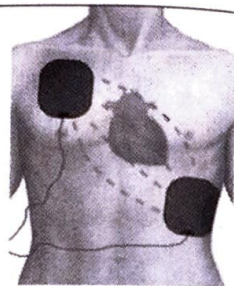
dead. **Indeed, all forms of technology are a "Life Support System"** in that they support survival and well-being of life.



Stun Gun Electrical Shock Tool



Electric Chair Electrical Death Tool

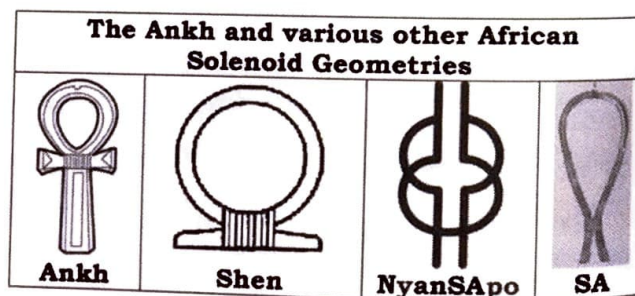


Defibrillator Electrical Life Resuscitation Tool Giving life to the Dead

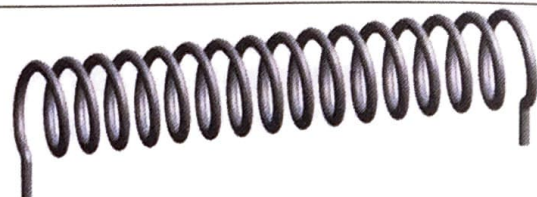
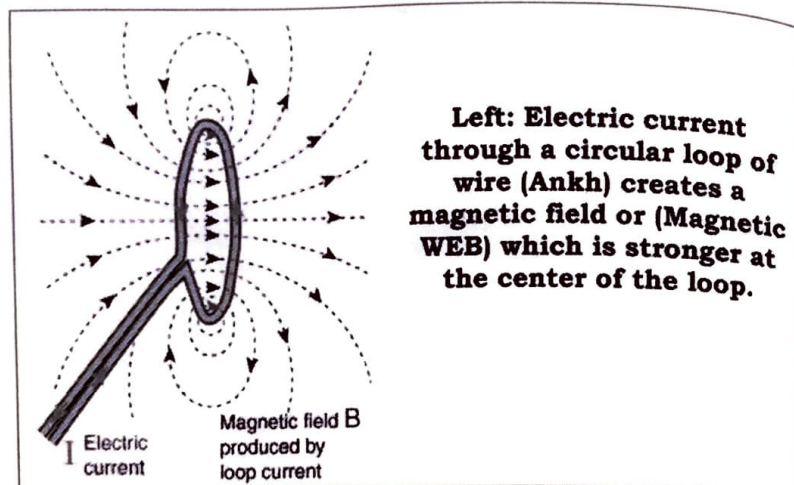
The fact that Life is enabled by the flow of Electricity gives new meaning and insight into the fact that **you are an Electronic Device** and your life is powered by the Electrical Current flow of electrons just like a computer, cell phone, or any other electronic device. Another important function of the Ankh and its relationship to Electrical Current is the use of the Ankh's loop coil as a **Solenoid**.

A solenoid is a loop or coil of conductive metallic wire that when an **Electrical**

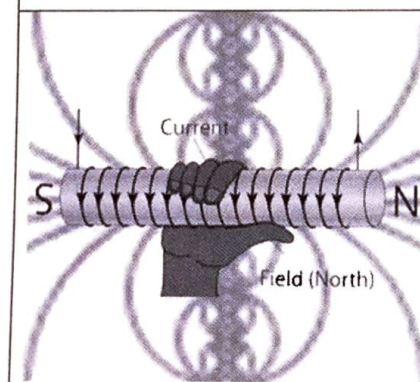
current is passed through the wire, a **Magnetic field** or **Magnetic Web** is induced. The magnetic field induced within the solenoid can be strengthened by increasing the number



and size of the Loops of the solenoid, and also by looping the solenoid wire around a **Metallic core**. This will essentially turn the metallic core into an **Electro-Magnet**, and the magnetic field can be made even stronger by using a **Ferro-Magnetic** metal as the **core** of the **Solenoid** such as **Iron** or **Steel** (which contains mostly Iron). The phenomenon where Magnetism is the result of Electrical current further illustrates the dual principles that are depicted by Ankh (in this case Electricity and Magnetism). The Magnetic Web (or Magnetic Field also called the Magnetic Flux Density in modern terms) is determined by the **Texture** or type of material used. Magnetic Field is measured in units called the "**Tesla**", represented in modern mathematic calculations by the symbol **T** which is similar in appearance to the African Ankh ⚡ . The "Tesla" was supposedly named for a European scientist named "**Nikola Tesla**". The strength of the **Magnetic Web** (or Magnetic Field) is called "Magnetic Flux" in modern terms, and is measured in units called "**Webber**" which is supposedly named for a European scientist named "**Wilhelm WEBER**". In modern mathematic equations and calculations, Magnetic Flux is symbolized by the Greek letter Φ (phi) which is also strikingly similar in appearance to the African Ankh ⚡ . The Magnetic North pole of the electro-magnet can be determined by noting the direction one's thumb is pointing if one were to point the fingers on one's right hand in the direction of the coils of the solenoid. This is the real "**black-power**" fist.

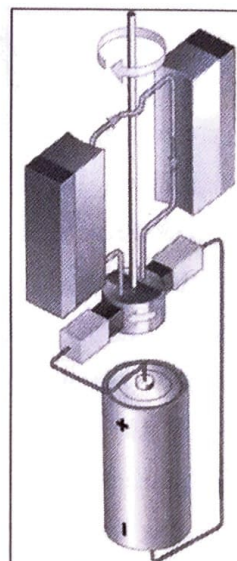


Above: Looping Multiple coils of wire strengthens the Magnetic field to create a SOLENOID.



Left: the "Black Power Fist" commonly known as the "Right Hand Grip Rule". When the fingers of the Right hand are pointed in the direction of the coil windings of the Solenoid, the Magnetic North pole of the "Magnetic Web" is in the Direction of the pointed Thumb.

Just as the circular movement of electrons around the coil of an Ankh Solenoid can produce a Magnetic field (called an Electro-Magnet), the circular movement of either a coil in a magnetic field or a Magnet (or magnetic field) around a coil can produce electricity (called an **Electric Generator** or **Dynamo**). The rotating Prime Mover of an Electric Generator is called a **Turbine**.



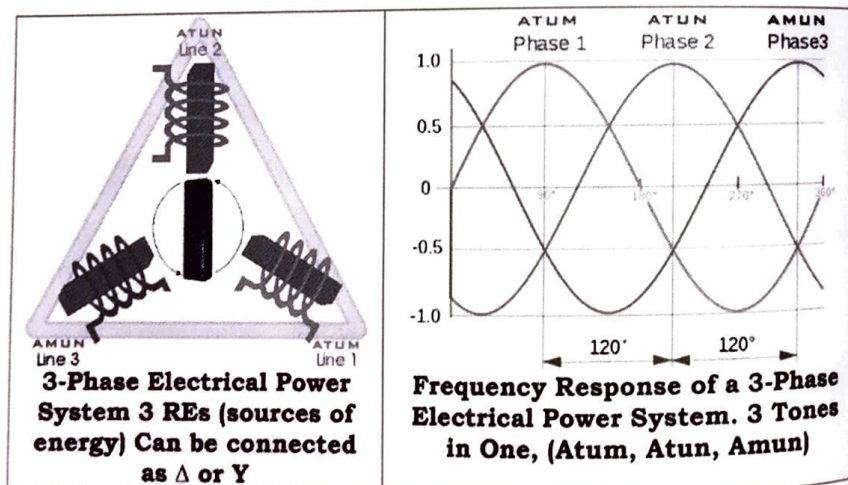
Above: The Ankh as the Prime Mover in a DC Electric Motor

When electrons flow through the loop of an ankh solenoid placed inside of a magnetic field, the different magnetic fields from the magnets and the Ankh solenoid cause the Ankh solenoid to rotate as the Prime Mover in an **Electric Motor**.

From the book entitled "The Ankh: African Origin of Electromagnetism":

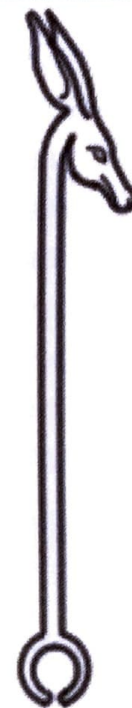
"The Ankh is essential to the liberation of African peoples throughout the world. Without the Ankh and its associated technology, we will remain dependant on the inferior technology permitted by the maintainers of the status quo. As a Free Energy Generator the Ankh represents the symbol of our liberation."

When an Ankh solenoid is rotated in the central point between three magnets separated by 120° degrees, or when a magnet is rotated in the central point between three ankh solenoids separated by 120° degrees, it creates what is known as a **Three-Phase Electrical Power** system. The three-phase system is used in modern electrical engineering as a means of power distribution over long distances and in induction motors which generate a rotating magnetic field. Three-Phase electrical power systems generate energy at three different frequencies or "tones" (**three tones in one**). This is somewhat similar to **Trichromatic vision** in that the light received by one's eye relies on three different color receptors which detect light (or **electromagnetic radiation**) at different frequencies or "tones". The concept of "three frequencies" or "tones" of energy in one was taught in ancient African philosophy as **RE** the "sun god" (or source of energy) having three different "aspects" (or tones/frequencies) called **Atum**, **Atun**, and **Amun**.



6. THE WAAS AND POWER

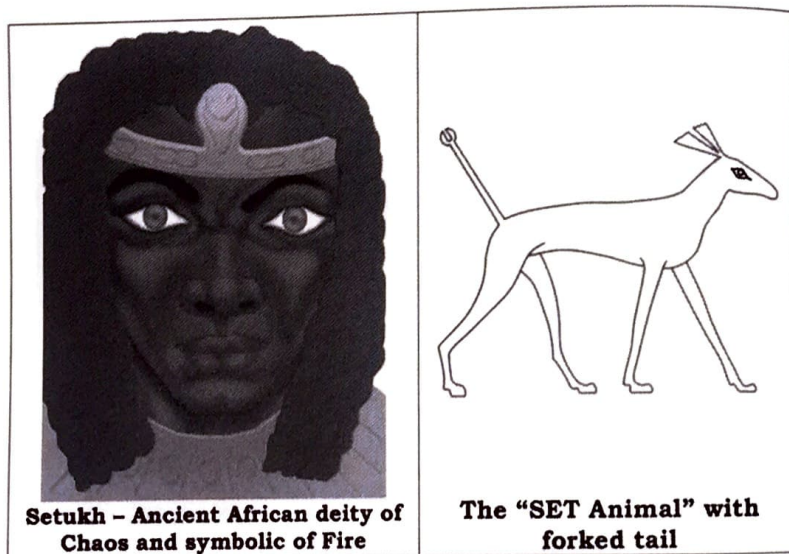
The **Waas** (also spelled Uas) is an Ancient African symbol that was used as a hieroglyphic in writing and as a scepter carried by deities, pharaohs, and priests that represented **Power**. The top and bottom of the Waas is shaped to resemble the head and tail of the **Set** Animal, the head of a Dog with a **forked** tail, which represented the African Egyptian deity **Setukh** or **Set** (an ancient African Deity of Deserts, Storms, and



WAAS
African Egyptian Symbol for "Power"

Chaos). In Ancient African Alchemy, the deity Set was associated with **Fire**, and in modern terms would be classified under **Plasma** (which includes **Electricity**). The waas which depicted Set was also associated with the Goddess **Wosret** (Waas-Set) meaning "**the powerful**". The association between the Waas scepter and the concept of "power" was explicitly and directly stated in Ancient African concepts. In modern terms, **Power** is defined in the field of Science called **Physics** (which means **Nature**) as the rate at which work is performed or energy is converted, and the flow of Electrical Current in an

Electrical circuit can transfer energy to do work using **Electric Power**. Electric Power is the rate at which Electrical Energy is transferred by the Electrical components connected in an electrical circuit. In modern terms, Electrical Power is measured in units called the **Watt** (phonetically similar to "Waas" - the symbol for Power in Africa) which is supposedly named for a European scientist called "**James Watt**". Descriptions have been provided about how both the Djed and Ankh components of the staff of Ptah could be used for both theoretical and practical purposes in the field of Electronics and Electrical Engineering.



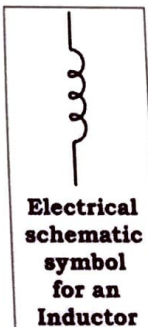
Setukh - Ancient African deity of Chaos and symbolic of Fire

The "SET Animal" with forked tail

The Waas component, symbolic of power, is the final element of the staff of Ptah that completes a circuit of Electrical Components which are both Theoretical symbols and Functional tools of Electrical Power. The voltage supplied by a **Djed Pillar pile battery** could pass **electrical current** through

a **copper conductive Ankh** loop used as a solenoid coil around an **iron Waas scepter** core to create an **Inductor** and **Electro-Magnet** as well as other electrical components with a variety of electrical engineering applications. Archeological evidence of Waas scepters have been discovered as old as the First Dynasty (3100 B.C.) made out of ceramic, glass, and/or **crystal** coated in metals such as tin, copper, and bronze. When Electric current flows through the coiled looped wire of an Ankh **Solenoid** wrapped around a metallic Waas core it creates the electrical component known in modern terms as an **Inductor**. An inductor is an electrical component that can store or "**House**" energy in a **magnetic field (Magnetic WEB)** created by the electric current passing through the coil loops of a Solenoid wire wrapped around a metallic core. The ability of an inductor to **House** energy in the **Texture** of a Magnetic Web is measured in units called "**Henry**" which was supposedly named for a European-American scientist named "**Joseph Henry**". Inductors (metal core **solenoids**) as electrical components can be used for the following applications:

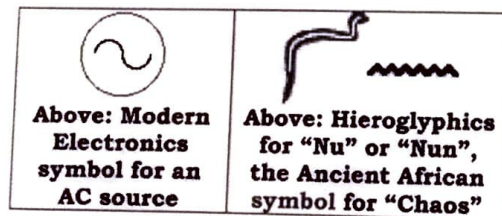
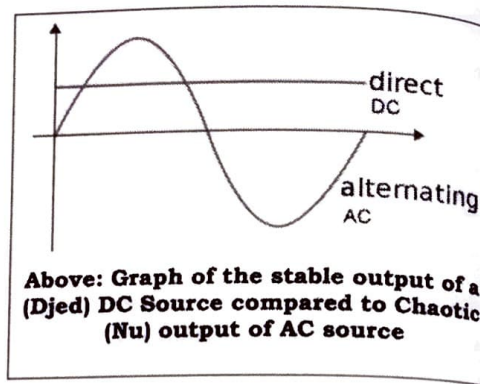
- **Inverters** (or **electronic resonators** or **oscillators**) to convert DC into AC
- **Transformers** to increase or decrease the energy transferred from one circuit to another
- **Transducers** to convert one form of Energy to another
- **Electric Generators** to convert Mechanical Energy into Electrical Energy



Electrical schematic symbol for an Inductor

- **Electric Motors** to convert Electrical Energy into Mechanical Energy

As stated earlier, the **Djed** pillar pile battery produces a **Stable** voltage known in modern terms as "**Direct Current**" (**DC**). DC is the **stable** and **steady** flow of electrons in one direction and is produced by most batteries. Unless the battery is rechargeable (a secondary electro-chemical cell) then the unidirectional flow of electrons eventually leads to the situation that is commonly known as a "dead battery". The opposite of "Stability" or "DC" (Djed) in electronics would be "Chaos" (Setukh symbolized by the Waas) or what is known in modern electronics as "**Alternating Current**" (**AC**). In the staff of Ptah, the Ankh (which is a symbol that unites Dual principles itself) is the unifier between the Djed and the Waas.



graph of the output of an AC source is what is called in modern terminology a "**Sine Wave**" named because of its

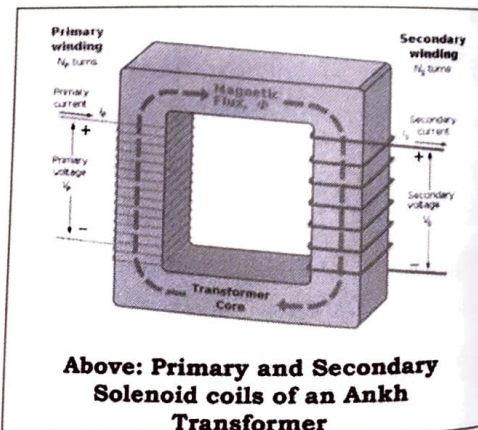
resemblance to the Crescent Moon and the ancient Mesopotamian moon deity **Sin**. This periodic frequency or **wave** movement was symbolized in Africa by the concept of **Nu**. In Ancient African Sciences, it is said symbolically that "**Ptah** as **Tatanen** rose from the **Chaotic** waters of **Nu** as the **Noble Djed (stability)**". AC can be converted to DC using electrical components known as **Rectifiers**, and DC can be converted to AC using electrical components known as **Inverters**.

In ancient Egyptian philosophy, the operative electrical components known as rectifiers and inverters are symbolically equivalent to the story of the cycles traveled by the "sun god" **RE** coming out of the chaotic waters of Nun as **Atum** (the completer, or the straightener), then on to **Atun** (the stable central point), and then **Amun** (the hidden one or inverted one). Rectifiers and Inverters are electrical tools that enable the movement of "electrical" energy in cycles. In the story of RE, Rectifiers enable the movement of RE (energy) from Nun (or AC in electrical circuit theory) into Aton (or DC in electrical circuit theory), and Inverters enable the movement of RE (energy) from Aton to Anun. Therefore, a "Rectifier" (which means "**to set straight**") would be similar to **Atum**, and an "Inverter" (which means "**to turn inside, out**") would be similar to **Amun**, the hidden one.

The **Frequency** or repetition of an AC signal is measured in "number of cycles per seconds" called "**Hertz**" (abbreviated as

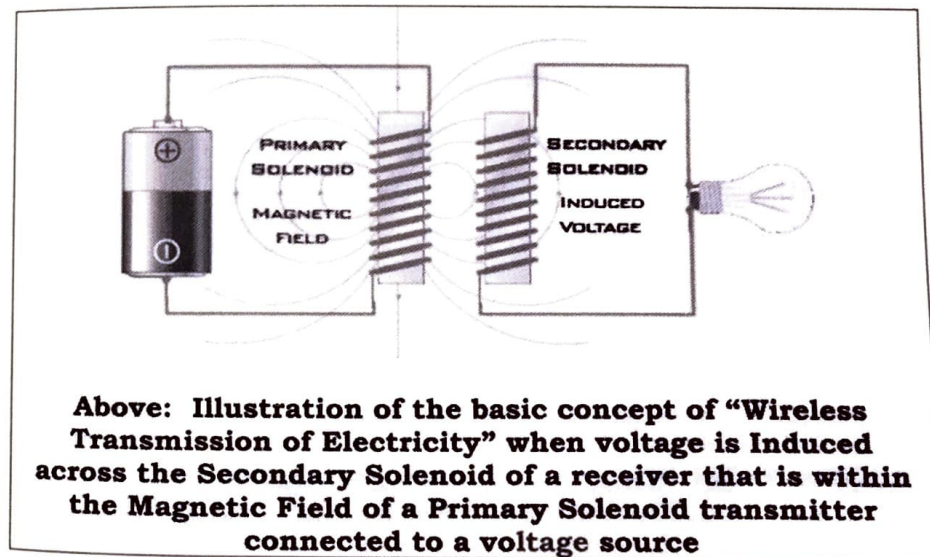
Hz). The unit of measurement for frequency called "Hertz" is supposedly named after a European scientist named "**Heinrich Rudolf Hertz**". AC is preferred over DC because it enables power utility companies to sell and distribute Power to customers over long distances. Also, it is easier to **Amplify** (Increase) or **Attenuate** (decrease) Voltages using Transformers with AC rather than with DC. Modern Power Companies usually use Frequencies between 50 to 60 Hz with 50 Hz commonly used by countries whose Power companies distribute 220 to 240 Volts, and 60 Hz commonly used by countries whose Power companies distribute 100 to 120 Volts. In most cases, the electronic devices that people use in their homes are dependant on the correct frequency, but do not require such high voltages as distributed by the power companies, and therefore contain **Transformers** to decrease the voltage to a useable range.

Transformers are basically Inductors with two solenoid coils of wire. Transformers use the science of **magnetic induction** to increase, decrease, or transfer energy from one electrical circuit to another. To



Above: Primary and Secondary Solenoid coils of an Ankh Transformer

attached to the voltage source. To decrease the voltage using a transformer, the Secondary Solenoid has to have fewer coils than the Primary Solenoid attached to the voltage source. If the number of coils on the primary and secondary solenoids are equal then the transformer merely transfers energy from one circuit to another. When transformers share a circular or **Toroidal** core (ring shaped cores as in the upper Loop of the Ankh) they are usually used for High-frequencies and have Higher Inductance due to the fact that the Magnet Web in a Toroid is confined to the ring with minimal loss. Wireless transfer of electricity basically occurs when transformers do not share the same core, but the Secondary Solenoid is close enough to the Magnetic field of the Primary Solenoid, that the Magnetic field of the Primary solenoid induces a voltage on the secondary solenoid.



Above: Illustration of the basic concept of "Wireless Transmission of Electricity" when voltage is Induced across the Secondary Solenoid of a receiver that is within the Magnetic Field of a Primary Solenoid transmitter connected to a voltage source

DC produced by the Djed pillar Pile Battery is converted into AC with an Electrical device called an "Electrical Inverter" which is symbolized in the Djed, Ankh, and Waas elements of the staff of Ptah. Electrical Inverters are "Electronic Oscillators" or "Resonators" which cause a stable DC signal to oscillate, resonate, cycle, or go "back and forth" at a certain frequency like an AC signal. The frequency oscillations of a resonator can be caused by either Electro-Magnetic or Mechanical means, which are both included within the theoretical and functional symbolism of the staff of Ptah.

Mechanical generation of the frequency oscillations of a resonator can be accomplished using an acoustic instrument known as a **Tuning Fork** or **Pitch Fork**. A Tuning Fork is an acoustic resonator which is symbolized by the **forked tail** of the **Waas scepter**. Tuning Forks are usually made of steel (an **iron** alloy which would also make them good cores for inductors). Tuning forks resonate or vibrate at a specific constant frequency when they are hit or struck. As the tuning fork vibrates, the handle moves up and down (like an **Actuator** in a solenoid) as the prongs vibrate back and forth. The pitch or tone that the tuning fork generates is dependant on the length of the two prongs. Tuning forks can be designed to vibrate at certain frequencies (for example 50 or 60 Hz



Above:
Tuning Fork
Acoustic
Oscillator /
Resonator
used as the
bottom tail
portion of
the Waas
Scepter

which is used as the frequency for most modern electronic

$$f = \frac{1}{l^2} \sqrt{\frac{AE}{\rho}}$$

devices) by the following mathematic equation

Where F is the frequency the fork vibrates at in hertz; A is the cross-sectional area of the prongs in square meters; l is the length of the prongs in meters; E is the Young's modulus of the material of the fork in Pascals; and ρ is the density of the material the fork is made from in kilo-grams per cubic meter. IT is common for **Quartz Crystal Oscillators**, such as those found in clocks and watches, to be constructed in the shape of tuning forks to make use of the combined effects of the pure tone generated by the vibration of the Pitch Fork shape in conjunction with the **piezoelectric** property of Quartz crystals. Piezoelectricity is a natural phenomenon where crystals and certain ceramics generate electricity when they are pressed, squeezed, hit, or vibrated. Waas scepters have been found made of both crystal and ceramic material.

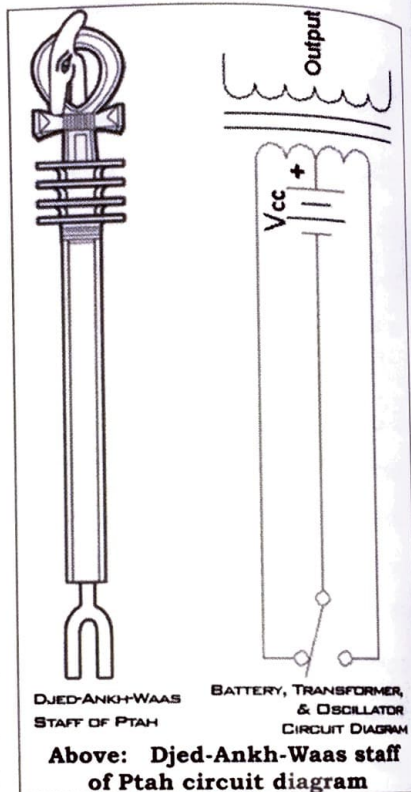
The Electronic Inverter circuit is constructed by connecting the Djed pillar Pile Battery DC source to the center-tap of the primary solenoid of the Ankh transformer. When the Fork tail of the Waas vibrates and oscillates continuously as a switch, the oscillation allows the current to flow back and forth on two alternate paths through one end of the primary solenoid of the Ankh and then the other. The alternating direction of the current in the primary solenoid of the Ankh transformer creates Alternating current (AC) in the secondary solenoid of the Ankh transformer.

The output waveform produced by the djed-ankh-waas staff of Ptah circuit can be refined using the capacitors and inductors as filters in the circuit.

Capacitors and Inductors can also be constructed as **LC circuits** (or **RLC circuits**) and used for the Electro-Magnetic generation of the frequency oscillations of a resonator. An LC Circuit is a resonant circuit (or Harmonic oscillator) consisting of an Inductor (represented by the letter L) and a capacitor (represented by the

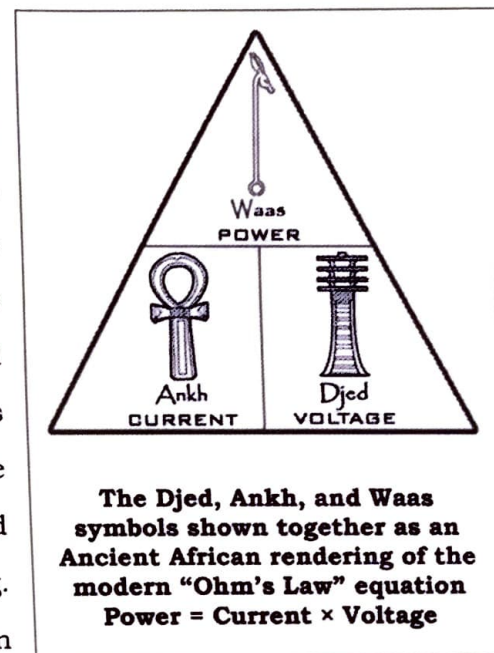
letter C). When considering the resistance that exists in the windings of the Inductor solenoid, LC circuits are called RLC circuits (where R represents the Resistor). In the LC circuit, electrical current oscillates, alternates, or goes back and forth from being stored between the plates of the capacitor and the magnetic field of the inductor. LC circuits can be used as oscillators to generate signals at a specified frequency or as filters and tuners to select certain signals at specified frequencies where the frequency of an LC circuit is given by the

$$\text{equation } f = \frac{\omega}{2\pi} = \frac{1}{2\pi\sqrt{LC}}.$$





7. PTAH'S LAW OF ELECTRONICS

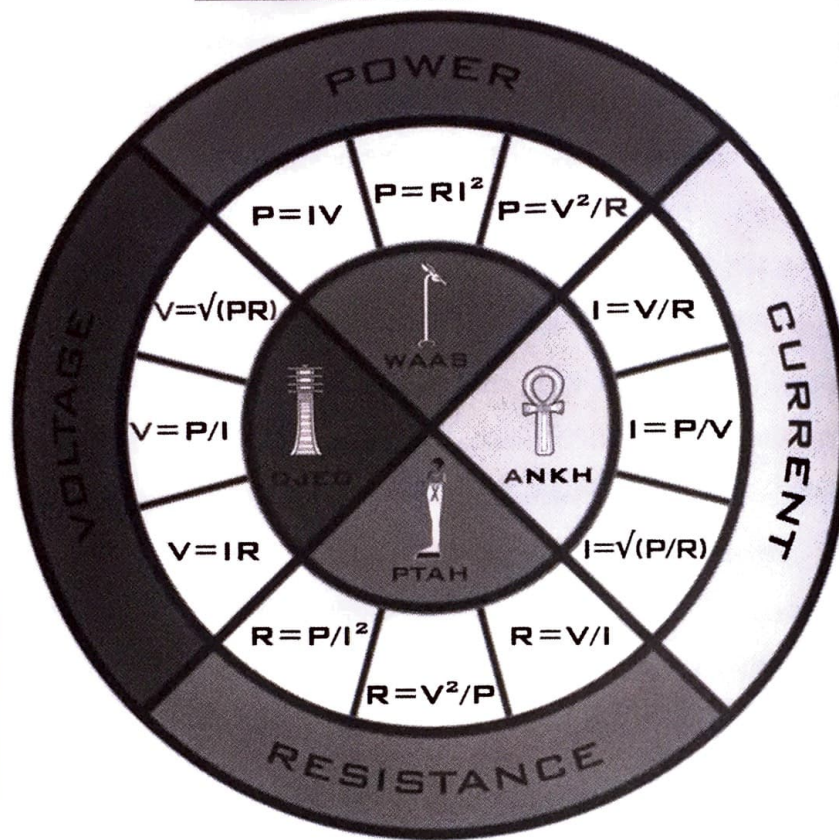
The Djed, Ankh, and Waas symbols that make up the staff of PTAH serve as both theoretical (metaphoric and symbolic) as well as functional (applicable and useful) symbols and tools that can be relevant to the field of Electronics and Electrical Engineering. These symbols have been



found together in several carvings throughout Egypt and Africa, however, they are found combined and connected to form a "**circuit**" in depictions of the staff held by the African creation god of Technology **Ptah**. Moreover, the Djed-Ankh-Waas scepter held by Ptah connects the Electrical circuit to **electrical Ground** (or **Earth**) because of course it is held by Ptah, an "Earth" deity. Also, the step pyramid and smooth-sided pyramids that were built in Ancient Egypt were constructed as representations of the "primordial mound" that was Ptah deified as Tatenen, and an inverted step pyramid

 and inverted smooth-sided pyramid () are used as the symbols in electronic schematics and circuit diagrams for "Earth Ground" and "Signal Ground" respectively. In electrical engineering, **ground** or **earth** is a **reference point** in an electric circuit from which other voltages are measured, and also a common **return path for electric current**, and serves as a direct physical connection to the **Earth** (Ptah). The modern mathematical equation that states the relationship between Voltage, Current, Power, and Resistance (symbolized by V, I, P, and R in modern mathematic equations respectively) is known as "Ohm's Law". "**Ohm's law**" is said to have been named after a European scientist named "George Simon Ohm" who is also credited with the discovery of the concept of "Electrical Resistance". "Ohm's Law" provides various equations used for mathematic calculations, analysis, and design of electrical circuits including the direct relationship between Voltage and Current (written $V = I \times R$) and the direct relationship between Power, Current, and Voltage (written $P = I \times V$). Although "Ohm" is credited with these concepts in modern science and math text books, the relationship between these concepts existed thousands of years before "Ohm" was born in the symbolism associated with **PTAH**. The Djed, Ankh, and Waas symbols of the Staff of Ptah are analogous to Voltage, Current, and Power in electrical circuits. Moreover,

the word "**Resistance**" comes from the word **resist**, and the etymological meaning of the word "**Resist**" is "**to take a stand**" or "**to stand firm**" and the act of "**standing firm**" (Resistance) is prevalent in depictions of **PTAH**. These symbolic metaphors and concepts have many applications in other areas such as philosophy, hydraulics, and thermodynamics, but they have been used and applied in this book specifically to the field of electronics and electrical engineering technology. For example, the relationship showing that Power is directly proportional to Voltage (separation) which is shown through the relationship between symbolism associated with the Djed, Ankh, and Waas is restated in philosophy as "**Divide and conquer**" (that is to say, **power can be obtained by separation**). The symbols, concepts, and metaphors associated with **PTAH** also represent concepts associated with **Duality** (two-ness, **twins**, twa-ness, Ptah-ness) that when applied to the field of Electronics and Electrical engineering, provide insight into the dual nature of **Electricity** and **Magnetism**. Therefore, the relationships described in the modern mathematical symbolism of "Ohm's Law" are predated by the Ancient African "**mathematical**" symbolism Associated with the deity **PTAH** which when applied to the field of Electronics and Electrical engineering form the base of **PTAH's LAW OF ELECTRONICS**.

PTAH'S LAW OF ELECTRONICS

"Ptah's Law of Electronics Cosmogram" showing modern mathematic equations for the Electronic relationships and symbolism of the components that combine to form "staff of Ptah" circuit.

Djed, Ankh, Waas, and Ptah are represented with the modern mathematical symbols V, I, P, and R representing Voltage, Current, Power, and Resistance measured in Volts, Amperes, Watts, and Ohms respectively.








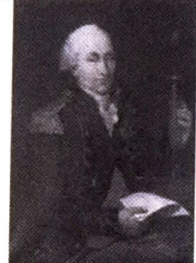


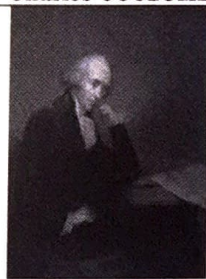
The words "electric" and "electricity" both derive from the Greek word "Electron". The word "Electron" is composed of two Greek words: 1) "**Elect-**", meaning "**to choose**" or "pick out" which is also related to the word "**Elite**" (selected or **chosen**) and "2) **-tron**", an instrumentive suffix used with a verb to designate **something that performs some action** (in this case, something that "Elects" or "chooses", i.e. the particle that "elects" to move).

The etymological root of all of the words Electric, Electricity, Electron, Elect, Elite, Lecture, and Intellect is "**Lexis**" (as in Lexicon) or more specifically "**Logos**", the "spoken word" in Greek philosophy that was derived from the creative utterance, Word, or **tone of PTAH** called **HU** in African philosophy. As previously stated, HU (the creative utterance of PTAH) was called **Aum** (or **Ohm**) in far eastern religions throughout Asia.

This background information provides new insight into the rather esoteric and symbolic phrase that appears in most modern math and science books that state "**Ohm's (Aum or HU- the creative tone of PTAH) Law provides the fundamental base for understanding Electronics**".

Considering that the relationships expressed in the mathematic equations of "Ohm's Law" are predated by the relationships in the symbols and depictions associated with the African creation deity PTAH, and that the name "Ohm" is surprisingly similar to **Aum** which was a concept derived from **Hu** (the creative utterance of PTAH), it would be reasonable to suggest that "Ohm's Law" is in fact "PTAH's Law" and the fundamental concepts that form the foundation of Electronics and Electrical Engineering are indeed of African origin.

Surprisingly, eerie relationships can be found between the last names of **11 European "Scientists"** that are said to have made discoveries and significant contributions in the field of electronics and the natural phenomenon that they are said to have discovered. Why is it that these relationships can be found? The question must be asked, "*Were these Natural physical Electrical Phenomenon named after the Scientist that discovered them, or were the Scientist named after the Natural Physical Electrical phenomenon they were researching?*" The list is as follows:

		
Alessandro VOLTA	George Simon OHM	André-Marie AMPERE
		
Joseph HENRY	Nikola TESLA	Wilhelm WEBER
		
Ernst Werner SIEMENS	Charles COULOMB	Michael FARADAY
		
Heinrich HERTZ	James WATT	

1. **George Simon Ohm** is credited for "Ohm's law" and the unit of measurement for resistance called the "Ohm" (symbol Ω), however the name "Ohm" or "Aum" is derived from "HU", the creative tone of PTAH who was already a symbol of "resistance" (standing firm) with a collection of associated concepts and symbols that expressed the same relationships but predated "Ohm's Law" by thousands of years.
2. **Alessandro Anastasio Volta** is credited with the discovery of the phenomenon called "Voltage" and the unit of measurement for "Voltage" called the "Volt" (symbol V), however the phenomenon known as "Voltage" is literally caused by a VAULT or **space** between the separated electrical charges.
3. **André-Marie Ampère** is credited with the discovery of the flow of electric current and the unit of measurement for electric current called the Ampere (symbol A), however, the word Ampere is just another pronunciation of the word Ample or **Amplify** which means "to increase in volume or amount" which is essentially what occurs in the water analogy for the flow of Electric Current.

4. **Wilhelm Eduard Weber** is credited with the discovery of the phenomenon known as "Magnetic Flux" and the unit of measurement for magnetic flux is called the Weber (symbol Wb), however, what is known as "Magnetic Flux" in modern terminology is essentially a WEB of magnetic field lines.
5. **Nikola Tesla** is credited with the discover of the phenomenon known as "Magnetic Flux Density" and the unit of measurement for "Magnetic Flux Density" is called the Tesla (symbol T), however, the name "Tesla" is just another pronunciation of the word TEXTURE which means "network, structure, or web" which merely describes the **WEB** of magnetic field lines.
6. **Joseph Henry** is credited with discovering the electromagnetic phenomenon known as Inductance and the unit of measurement for Inductance is called the "Henry" (symbol H), however, inductance is the phenomenon where energy is HOUSED or stored in the magnetic field of a solenoid, and the name "Henry" means "ruler of the HOUSE"

7. **Charles-Augustin de Coulomb** is credited with discovering the phenomenon known as electric charge, and the unit of measurement for electric charge is called the "Coulomb" (symbol C), however, the name "Coulomb" is just another pronunciation of the word "COLUMN" which is a reference to the Djed column that is capable of storing and producing electric charge

8. **Michael Faraday** is credited with discovering the phenomenon known as Capacitance and the unit of measurement for Capacitance is called the "Farad" (symbol F), however, Capacitance is the ability of a component to hold, HARBOR, or STORE an electric charge, and the name FARAD is just another pronunciation of the word FORD which means "a port to HARBOR or STORE".

9. **Ernst Werner von Siemens** is credited with discovering the phenomenon known as Conductance and the unit of measurement for Conductance is called the "Siemen" (symbol S), however, Conductance is the property that enables the FLOW of ELECTRIC particles which is called SEMEN in the biological symbolism and electrical analogy of the Ankh

10. **James Watt** is credited to have made significant contributions to the development of the STEAM engine and the unit of measurement for Power is called the "Watt" (symbol W), however, the name "Watt" is just another pronunciation of the word "WET" and "WATER" which has an etymological meaning referring to "an ANIMATING FORCE (power)" and the association between Water (WATT) and Steam is apparent. Watt is also phonetically similar to "Waas", the ancient African symbol for "power"

11. **Heinrich HERTZ** is credited to have explained the electromagnetic theory of light and the unit of measurement for Frequency or "cycles per second" is called "Hertz" (symbol Hz), however, the name "Hertz" is just another pronunciation of the word "HURT" which has an etymological meaning of "**to strike or collide**" which is exactly the cause of a Frequency or "cycles per second" oscillation.

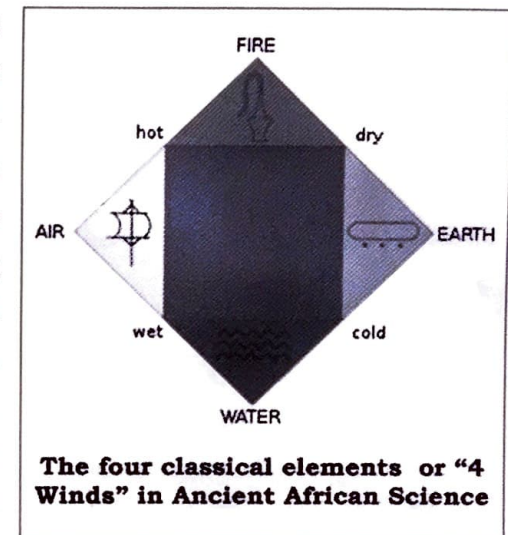
Perhaps the relationships and associations between the names of the European scientist that are said to have discovered various Physical Electrical Phenomenon, and the Actual Phenomenon themselves are just strange coincidences, or perhaps these "scientist" did in fact take on names related to the physical phenomenon they were investigating. If the relationships between the names of these scientist and the phenomenon they were researching are indeed a "coincidence" then this would be a remarkable example of metaphorical **"Lightning Striking Twice"** (or in this case 11 times).

In either case, one thing remains certain, and that is that the concepts and ideas that these various European scientist are credited to have discovered were known to and depicted by African people using the various symbols, metaphors, and portrayals of the African Creation God of Technology **PTAH** thousands of years prior to any European scientist.

Indeed, **Electronics and Electrical Engineering is one of the many Crafts of PTAH.**

8.0. EARTH, WATER, WIND, SUN, AND SOUND ENERGY

In Ancient African Alchemy, the **four classical elements** (or "4 winds" or "4 Vibrations") that were considered the fundamental building blocks that represented the Energy of everything in Nature were Earth, Water, Air, and Fire. Modern science has re-framed these concepts from

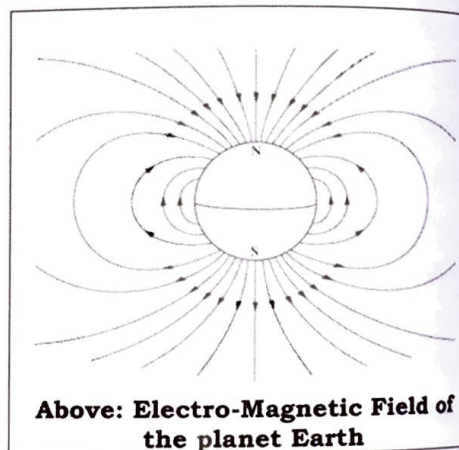


Ancient African Alchemy as **"Phases of Matter"** called Solid (Earth), Liquid (Water), Gas (Air), and Plasma (Fire). Within all matter, regardless of the phase or state that it is in, there are sub-atomic particles that move and vibrate constantly. It is the rate, speed, or frequency of the vibration and movement these sub-atomic particles that determines the Phase or "state" of matter. When the vibration or movement of matter is large enough to be detected by our human ears, we call it **"sound"**. In Africa, these concepts were personified in the Egyptian Sa-Djed or Ennead cosmology as Geb (Earth or solid), Tefnut (Moisture or liquid), Shu (Air or Gas), and Set (Fire or Plasma), with HU as the vibration of Creation by PTAH that is generically called "Tone" or "Sound", It is this vibration,

movement, or "sound" that indicates and determines Energy in all "Phases of Matter" in the modern sense (Solid, Liquid, Gas, or Plasma), or "Elements of Nature" in the Ancient African Alchemical sense (Earth, Water, Wind, and Fire). The Natural Energy that exists in all matter is what has become known as "**Free Energy**", and being able to harness, tap, and use this energy is "**Liberation Energy**" in that the individual has the knowledge and "know how" (technology) to obtain "Free Energy" for his or her self and is liberated from being dependant on someone else to obtain the energy for them.

Earth Energy:

Within the Earth there is what is known as "**Telluric Currents**" which are low frequency electric currents that travel inside the Earth near the surface of the Earth's crust. The word "**Telluric**" means "Earth"



Above: Electro-Magnetic Field of the planet Earth

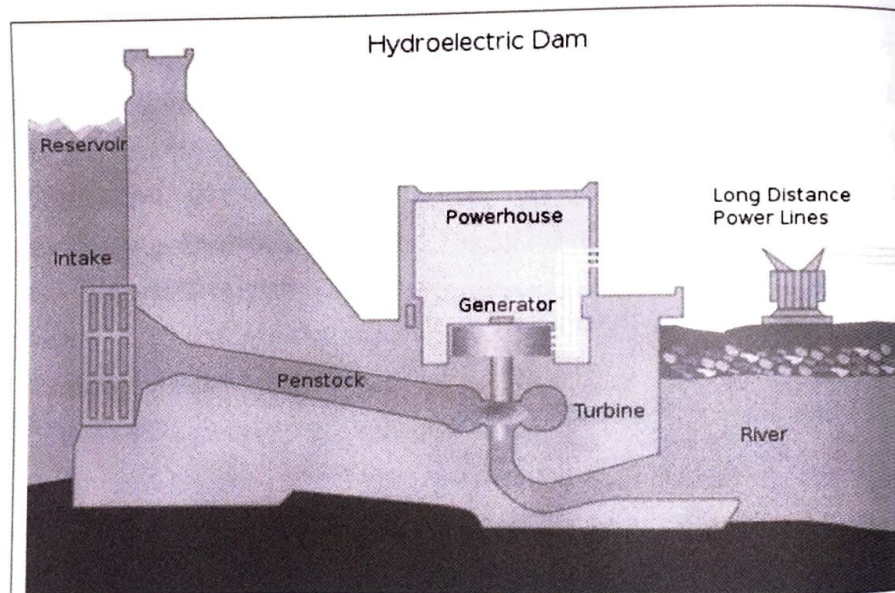
(TA). Telluric Electrical current is a Natural Phenomenon that is caused by the interactions between the Earth's magnetic field, Solar Radiation, and the Earth's atmosphere. Telluric Electrical Current also results from **Thunderstorms**. Telluric Current flows in the direction of the Sun, and as the Earth rotates, the direction of the current moves toward the Equator during the day, and towards the poles during the night. The Earth Energy known as "Telluric Electrical currents" or

"Telluric Radiant Energy" can be harnessed by simply pushing two different types of metals into the ground separated by some distance. This creates an "Earth Battery" (or a "Telluric Power Source" or "Telluric Generator"), and it functions on the same principles as a regular battery just like **Djed pillar pile battery**. Using two different metals like copper and zinc pushed into the ground and separated by a distance (for example 1 meter), the metals act as electrodes, and the soil of the Earth serves as an electrolyte containing the telluric electrical currents. Telluric Electrical current harnessed by Earth Batteries were used as power sources of early Telegraphs to communicate over long distances. One of the earliest examples of an earth battery was built in order to power and drive a **prime mover** (the primary or main moving gear of a motor) in order to operate a clock. A single cell of an Earth Battery consisting of Copper and Zinc separated at a distance of 1 meter should produce about one volt, and higher voltages can be obtained by connecting multiple Earth Batteries in series.

Water Energy:

Just as two different metals can be placed into the ground to harness Telluric Currents to make an Earth Battery, the same process can be done by placing two different metals into the sea. When the metals are immersed in the sea, it creates what is called a "Water Activated Battery" using the sea water due to its high salt content as the electrolyte, and metals like Aluminum and Magnesium as the electrodes in the electro-

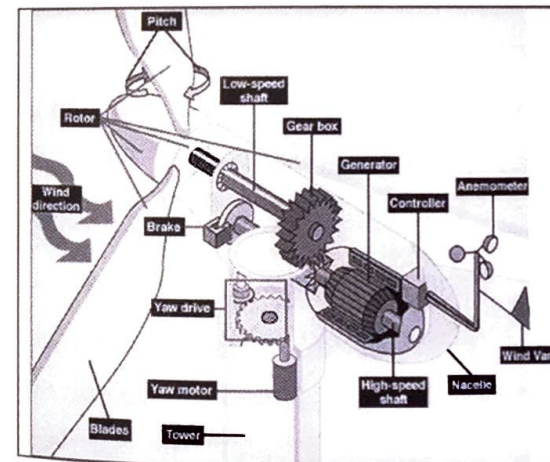
chemical cell of the battery. The Japanese developed a “**water activated battery**” called **NoPoPo** in 2007 which comes with a syringe to inject the electrolyte (like water or juice) and can be used in common electronic devices. Another kind of water energy is what is known as “**Hydro-Power**”. Hydro-Power makes use of water pressure moving through a dam to turn the **Turbine** (magnets or solenoid) of an electric generator to create electricity. The electricity generated by the flow of water turning the magnets is then distributed to customers using power lines.



Above: Hydro-Electric Power plant

Wind Energy:

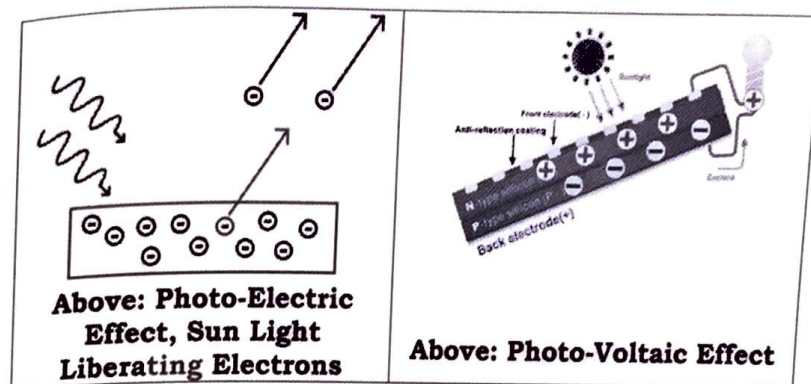
The Natural Phenomenon that is generally called “wind” is more specifically and scientifically defined as the flow of gases resulting from a separation or difference between the high and low pressure of a gas when the high pressure gas accelerates and flows toward the low pressure gas due to thermodynamics. In this respect, wind or “the flow of gases” is much like Electric Current or “the flow of electrons”. Wind Energy can be harnessed to produce Electricity by using the kinetic energy of wind to turn the turbine of an Electric Generator. Wind powered turbines can be constructed on a Horizontal axis (which looks similar to most fans) that have to be pointed into the wind in order for the turbine to turn, or wind powered turbines can be constructed on a vertical axis which does not have to be pointed in the direction of the wind and are beneficial in areas where the direction of the wind varies.



Left: Interior of a Wind Powered Turbine

Solar Energy:

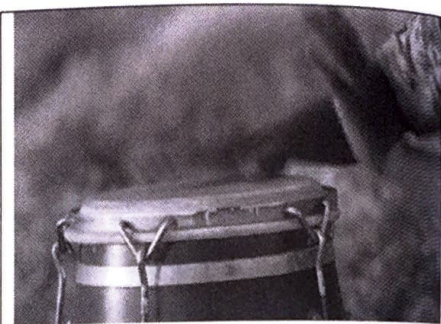
The proper scientific description of "Light" is "**Electro-Magnetic Radiation**" or more simply the movement of Electrons. The movement and/or vibration of electrons at various speeds and frequencies is what determines the **Electro-Magnetic Spectrum**, and the portion of the Electro-Magnetic Spectrum that is visible to Humans is called the **Visible Light Spectrum**. The Visible Light Spectrum consists of the "colors" (or speeds of electron movement) ranging from Red, Orange, Yellow, Blue, Indigo, and Violet where Red is the slowest frequency of electron movement and Violet is the Fastest frequency of electron movement. Beyond the Violet speed of Electrons on the Electro-Magnetic Spectrum, there is what is called **Ultra-Violet** (really fast moving Electrons), and one of the main sources of Electrons moving at the Ultra-Violet speed is the **Sun**. **Solar Energy** in the form of Electricity can be produced by the Sun by a natural phenomenon known as the **Photo-Electric Effect**. The Photo-Electric Effect occurs when electrons coming from the Sun are moving so fast at the Ultra-Violet Speed that when they come in contact with other matter they collide with other electrons ejecting and knocking them free. So it is said that **Sun Light Frees or Liberates Electrons**. When the flow of electrons caused by the Photo-Electric Effect occurs within a Semi-conductor, it creates a **DC voltage** across the electrodes of the Semi-Conductor known as the Photo-Voltaic Effect. These Semi-Conductors used to Harness the **Solar Power** are called Photo-Voltaic cells or **Solar Cells**.

Sound Energy:

The phenomenon that Humans call "Sound" is more accurately described as "Vibration" or "movement". Since there is vibration and movement on all scales from the Microscopic and Sub-atomic to the Macroscopic and Universal, there is indeed "sound" on all scales as well. Just as there is a "Visible Light Spectrum" of electron movement that we can see, there is an "Audible Sound Spectrum" of movement or vibrations that we can hear. In many African cultures, the **beating of the Drums** is considered a means by which **Energy** in the form of sound is **transferred** to the people. The process of transferring or transforming sound energy into Electrical energy is accomplished electronically by a device called a **Transducer**. Probably the most well known transducer for turning sound into an electrical signal is the **Microphone**, while **Speakers** turn electrical signals into sound. Transducers are also used

"voice activated" or **"voice controlled"** electronics that **respond to vocal commands**. However, the process of transforming sound into Electricity that can be used as Energy using a transducer can be accomplished by means of devices such as **Vibration powered generators** or **Piezo-electric Transducers**.

Vibration powered generators basically make use of the fact that the movement of magnets around a solenoid coil creates and electric current, therefore



Above: Sound Energy From an African Drum Ceremony

Vibration powered generators use vibrations in the form of sound to move magnets to generate electricity. Piezoelectric transducers turn sound into electricity by making use of the natural phenomenon of crystals known as the **Piezo-electric Effect** where **a crystal generates an electric field when it vibrates**. Indeed, an African Drum ceremony could generate enough electricity to power a village.

9.0. EXPERIMENTS TO EXPERIENCE EVIDENCE

EXPERIMENT 1: CREATE A DJED PILLAR PILE BATTERY

Materials Needed:

- 4 Pennies (or 4 round pieces of copper)
- 4 Nickels (or 4 round pieces of zinc coated metal)
- 4 cotton rounds (or construction paper cut in circles about 1.5 inches in diameter)
- Salt
- Vinegar
- Clay
- LED (light emitting diode)
- Voltmeter or Multi-meter
- Measuring cup
- Small bowl

Instructions:

1. Mix 1/4 cup of vinegar and 1 tsp of salt in a small bowl to make an electrolyte
2. mold a cylinder base out of clay that is about 2.5 inches tall and 0.75 inches in diameter
3. dip and soak the cotton rounds in the salt and vinegar solution, squeeze out the excess, and place one on top of each nickel
4. place one penny on top of each cotton round-nickel stack
5. stack each "nickel-cotton round-penny" stack on top of each other so that the pennies are in contact with the nickels, then place the entire stack on your clay base
6. test the voltage at the top penny and bottom nickel
7. connect the LED using wire to the top penny and bottom nickel, and see the Djed Pillar pile battery produce light

~Note: Pennies with a date of 1981 or earlier are 95% copper and pennies with a date of 1982 or later are 98% zinc with a thin copper coating. You want to use 1981 pennies or older for this experiment.

Further Exploration: try using different electrolytes like Lemon Juice, Salt Water, Alkaline Water, Lye, etc and see if there is an improvement in the voltage across Djed pillar pile battery

EXPERIMENT 2: Create an Electro-Magnet**Materials Needed:**

- A 4 inch Galvanized Nail (zinc coated nail)
- 5 meters of 24 to 30 gauge magnet wire
- AA battery
- Sandpaper
- Staples or other light ferromagnetic metal

Instructions:

1. Wrap the wire around the Nail to create a solenoid leaving about 10 cm of wire unwrapped on each end
2. Use the sandpaper to sand the enamel from the ends of the wire
3. Connect one end of the wire to the positive end of the AA battery, and connect the other end of the wire to the negative end of the AA Battery
4. Wave the Nail over the staples and see the Electro-Magnet attract the staples

Further Exploration:

Wrap the wire in the shape of an Ankh and pass the Nail through the loop of the Ankh solenoid like a Waas and test the electromagnet. Connect the wire to the Djed pillar pile battery that was made in experiment 1 and test the electromagnet

EXPERIMENT 3: Create an Electric-Generator**Materials Needed:**

- 2 strong magnets no bigger than 2 cubic centimeters
- 60 meters (200ft) of 24 to 30 gauge magnet wire
- LED (light emitting diode)
- Toilet Paper roll
- Large nail, 8cm or longer
- Sandpaper

Instructions:

1. Use the nail to poke a hole through the center of the Toilet Paper roll
2. clamp the magnets around the nail and spin the nail to make sure the magnets spin freely inside the toilet paper roll without bumping the sides
3. lightly wrap the wire around the toilet paper roll 300 times leaving about 10 cm of wire free on both ends
4. Use the sandpaper to sand the enamel from the ends of the wire
5. Connect the ends of the wire to the LED
6. spin the magnets by the nail and see the spinning magnets produce electricity and light

Further Exploration:

Use your creativity to improve on this design. Create a bigger spool to wrap the wire, and use more, bigger, and stronger magnets, spin the nail and magnets with an electric drill or some other mechanical spinning device to see if more power can be obtained from this simple electric generator.

Use your creativity and the concepts learned in "Experiment 2: Electro-Magnetism" and "Experiment 3: Electric Generator" to construct a spinning electro-magnet, that creates an electric generator to further explore how electricity can create magnetism and magnetism can create electricity.

EXPERIMENT 6: Create an Earth Battery

Materials Needed:

- Soil
- Salt
- Vinegar
- Copper Metal
- Zinc Metal
- LED (light emitting diode)
- Voltmeter or Multi-meter

Instructions:

1. Go outside and get 1 cup of soil in a container
2. Mix 1/4 cup of vinegar and 1 tsp of salt in a small bowl then add to the container of soil
3. Push a piece of copper metal and a piece of zinc metal into the soil separated so that they do not touch
4. Measure the voltage across the copper and zinc metal using a Voltmeter or Multi-meter
5. Connect the LED to the copper and zinc metal and see the Earth produce electricity and light

Further Exploration:

Repeat the experiment with different types of soil and with different electrolyte solutions and no electrolyte solution and note the differences in the voltage produced.

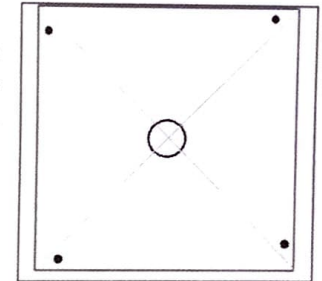
EXPERIMENT 7: Create a Windmill Electric Generator

Materials Needed:

- Square piece of Construction paper (about 20 cm by 20 cm)
- Compass
- Large nail, 8cm or longer
- 2 strong magnets no bigger than 2 cubic centimeters
- 60 meters (200ft) of 24 to 30 gauge magnet wire
- LED (light emitting diode)
- Toilet Paper roll
- Sandpaper

Instructions:

1. Draw a diagonal from the top left corner to the bottom right corner and from the top right corner to the bottom left corner of the square piece of construction paper, and use the intersection point as the pivot point of your compass to draw a 3 cm circle at the center.
2. Cut each of the lines from the corner to the circle. Punch a small hole on the side of each corner as shown in the picture.
3. Bend the corner of the paper over to the center intersection, and repeat for each of the 3 other corners.
4. Push a nail through the center to secure the pinwheel windmill
5. Use the nail in the center of the Pinwheel windmill in the construction of the electric generator from experiment 3.
6. Blow on the pinwheel windmill or let it turn in the wind which will turn the magnets of the electric generator and produce electricity



Further Exploration: Use your creativity to improve on this design. Use different, stronger, and larger materials to see if more power can be obtained from this simple Windmill electric generator.

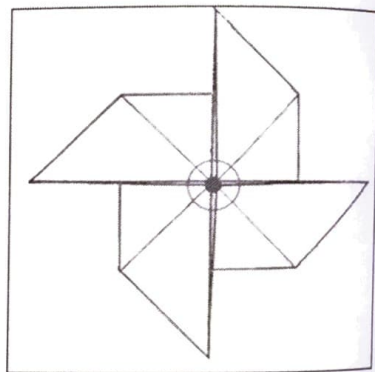
EXPERIMENT 8: Create a Hydro-Power Electric Generator

Materials Needed:

- Square piece of Construction paper (about 20 cm by 20 cm)
- Compass
- Laminate
- Large nail, 8cm or longer
- 2 strong magnets no bigger than 2 cubic centimeters
- 60 meters (200ft) of 24 to 30 gauge magnet wire
- LED (light emitting diode)
- Toilet Paper roll
- Sandpaper

Instructions:

1. Laminate the construction paper with plastic
2. Repeat steps 1 through 5 of experiment 7
3. Place the Waterwheel (laminated, plastic covered windmill design) in the stream of some water which will turn the magnets of the electric generator and produce electricity



Further Exploration:

Use your creativity to improve on this design. Use different, stronger, and larger materials to see if more power can be obtained from this simple Hydro-Power electric generator.

EXPERIMENT 9: Create a Solar Cell

Materials Needed:

- Two 4-inch-by-4-inch sheets of copper flashing
- An electric stove or electric "Hot plate"
- A large wide-mouth glass mason jar
- Table salt
- Hot Tap water
- Sandpaper (or steel wool)
- 2 sets of alligator clip leads
- A micro-ammeter

Instructions:

1. Turn your electric stove or "hot plate" burner on high. When the burner gets red hot, put one piece of copper on the electric burner, and cook the copper for half an hour until it turns completely black.
2. Turn off the stove and let the copper cool off for about 20 minutes. Some of the black cupric oxide will pop off. Remove the copper from the stove and clean the black cupric oxide off of the copper by gently scrubbing the copper with the sandpaper or steel wool under running water. Don't try to get all of the black cupric oxide off; it is more important to preserve the red layer of cuprous oxide below it.
3. Bend the burned sheet of copper and the unburned sheet of copper so that they will fit inside your glass Mason jar without touching.
4. Fill the glass jar with hot tap water so that about one inch of each copper sheet sticks out from the water. Add 3 tbsp. of salt to the water and mix.
5. Connect the two plates to the ammeter using the alligator clips so that the plate with cuprous oxide is connected to the negative terminal and the clean plate is connected to the positive terminal. You now have a solar cell, with a charge being read on the micro-ammeter.
6. Move the solar cell you just made into the sun and observe the readings on the micro-ammeter. Your creation is also a battery, so it will display a little bit of current even in the shade but should show significant spikes when exposed to sun light.

Further Exploration:

Construct several solar cells and connect them in series to see if you can get the solar cell to light an LED.

O. ABOUT THE AUTHOR: WHAT IS AFRICAN CREATION ENERGY?

The word "**Physics**" is a Greek word meaning "**Nature**" and has been used to refer to the scientific study of Space, Matter, and Time. In the field of Science called Physics, "**Energy**" is defined as simply "The Ability to do **work**" or the amount of **Work** that can be done by a **Force**. In the field of Science called Physics, a "**Force**" is defined as any thing that causes the **Change of Position** and hence suggests **Movement**. Only the field of Science called Physics (Nature) in the area of **Thermodynamics** (which studies the movement and transformation of Energy) can there be found any Scientific Laws (that which is not assumed but rather known and accepted as an undisputable fact). One of the Laws of Physics (Nature) is called "**Conservation of Energy**". The Conservation of Energy Law of Nature (Physics) states that **Energy cannot be created** in the sense that it comes from Nowhere and Nothing into existence, and **Energy cannot be destroyed** in the sense that it ever ceases to exist, but rather **Energy can Transform or change from one form to another**. Energy has many forms including Potential Energy, Kinetic Energy, Atomic Energy, Heat Energy, Electromagnetic Energy, Chemical Energy, Gravitational Energy, Sound Energy, and all phases of Matter. Everything in existence is made up of some form of energy. In Nature (Physics), **Power** is scientifically defined as the rate or amount of time it takes for **work** to be done or

energy to be converted. In Nature (Physics), **Radiation** is scientifically defined as any process by which the energy emitted by one object travels through a medium and is eventually absorbed by another object. In the field of Science called Physics (Nature), a **Black Body** is scientifically defined as an ideal object that absorbs all electromagnetic radiation (Light Energy) that it receives.

Creation refers to the act or process of causing something new or novel (nova) to exist or come into being. As it follows from the discussion about Energy, since everything in Existence is composed of Energy, and Energy can only change from one form to another, then Creation and Creating does not mean bringing about something new into existence from Nothing and Nowhere, but rather Transforming or changing the form of one thing, or combining the forms of several things, into the desired new thing. Creation of anything in any form is a gradual process of **Growth** and change over time in which a metaphorical or literal seed, nut, kernel, or node grows and transforms into another form, figure or structure. A new creation is always the initiation or beginning of one thing and the termination or ending of another thing. Growth and Decay are mathematical concepts which indicate the increase or decrease of a quantity, magnitude, or multitude over time respectively. Creativity is the level or degree of creative mental ability, and a creation always exists as a thought, idea, or concept in the mind of its creator before manifesting in the physical world. Creation occurs through Creativity, and one of

the most important Creativity techniques is "Problem Solving". Problem Solving occurs when it is desired to go from one state to another state (change of position), and therefore from the scientific definitions given, "Problem Solving" and **Creativity** are both a mental **Force** which can be measured as **Energy**.

From the scientific definitions given, it follows that **African Creation Energy** can scientifically be defined as the Work, Effort, Endeavors, and Activities of Black or African people that cause a movement or change. African Creation Energy is The Energy, Power, and Force that created African people and that African people in turn use to Create. Since African people are the Original people on the planet Earth, it follows from thermodynamics that the Creation Energy of African people is the closest creation Energy of all the people on the Planet to the **Original Creative Energies** that created the Planets, stars, and the Universe. **African Creation Energy** is **Black Power** in the scientific sense of the word "Power", and this book **Radiates** African Creation Energy to be absorbed by the **Black Body**.

Amongst the **Yoruba** people in **Nigeria**, **African Creation Energy** is called "**ASHE**" which means "the power to make things happen" and the various forms of African Creation Energy are personified in the Yoruba "Orisha" (Ori-Ashe) deities. Amongst the **Akan** people in Ghana in the Twi language, **African Creation Energy** is called "**TUMI**" – the web

of energy and power that exists throughout space and all of creation which was woven and designed by the Akan deity of wisdom Ananse Kokuroko. In the Congo, **African Creation Energy** is called "**DIKENG**" which refers to the energy of the universe and the force of all existence and creation, and the thermodynamic process of the transformation of energy is depicted in the Congo cosmogram called the "Yowa". Amongst the **Mande** people of West Africa, the Creative Force called **Nyama** or **Amma** is used by the Blacksmiths as a means to forge technology for the well-being of the entire village. In Ancient Africa, Egypt, Nubia, KMT, Kush, Tamare, *etc. et al*, **African Creation Energy** was called **Sekhem** which was energy that individuals used to control the elements of nature to create anything desired. In books written by Amunnub-Reakh-Ptah, the original creative force of African people is called **Nuwaupu**.

It is the view in the Western world that "*Those who can, DO; and those who CANNOT, teach*". This statement is used to imply that people who are able to Use knowledge once it is acquired put it into practice and those who do not know how to use the knowledge or do not have the ability to use the knowledge can only "Teach" or relay the knowledge and information on to someone else. This western view about knowledge, information, and Teachers motivates western governments to pay Teachers the lowest salaries and in turn, forces individuals who do have the "Know How" to put Knowledge into practice, out of the classroom; which only

further mentally cripples the future generations. The etymology of the word "Teach" is "to speak, to tell, or to say," and the etymological sense of the word "Technology" is "to build or construct by uttering reasonable speech"; this shows a close relationship between Teaching, Technology, and "speech" (HU the creative "tone" of PTAH). Whereas Teaching is "speaking" to Instruct, Technology is "speaking" to construct. **African Creation Energy** is about **CONSTRUCTING** (DOING, TECH) and **INSTRUCTING** (TEACH) – doing what is necessary to apply all knowledge (Technology) acquirable and practical for the well being of African people NOW, and teaching, instructing, and relaying the Knowledge and the Know How to ensure the well being of African people LATER. With that being stated, the physical writer of this book - who is African by blood and lineage, a descendant of the Balanta and Djola tribes in present day Guinea-Bissau (Ghana-Bassa) in West Africa, a descendant of the Ancient Napatian, Meroe, Kushite Empire, and a Scientist, Engineer, Mathematician, Problem Solver, Analyst, Synthesizer, Artist, Craftsman, and Technologist by education, profession, and nature - has set out to develop, engineer, invent, formulate, build, construct, and create several Technologies (Applications of Knowledge) for the well being of African people world wide and has attempted to relay and teach the information that motivated and inspired the development of those technologies in a three part introductory educational series which collectively have been entitled "The African Liberation Science, Math, and Technology Project" (**The African Liberation S.M.A.T. Project**). The three books that

are part of African creation Energy's "African Liberation S.M.A.T. project" are:

1. **SCIENCE:** (Knowledge/Information)

The SCIENCE of Sciences, and The SCIENCE in Sciences

2. **MATHEMATICS:** (Understanding/Comprehension)

Supreme Mathematic African Ma'at Magic

3. **TECHNOLOGY:** (Wisdom/Application)

P.T.A.H. Technology: Engineering Applications of African Science

The purpose of African Creation Energy's "African Liberation S.M.A.T. project" is to free the minds, energies, and bodies of African people from mental captivity and physical reliance and dependence on inventions and technologies that were not developed or created by, of, and for African people. In the western world (America and Europe) there are certain technologies such as indoor plumbing, electricity, computers, internet, heating and air conditioning, television, radio, and automobiles that have become so commonplace in the lives of people that it is difficult for some people to imagine life without these technologies. Conversations with the most "Afro-Centric" or "conscious" Black person in the Western World reveal that one of the primary reasons why they prefer to live in the Western World rather than in Africa is for the technologies that they have become used to in America or Europe. A significant amount, if not all, of the inventions needed for survival and

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well being that African people in Africa and the Diaspora use globally have been invented and developed by individuals other than Africans. Therefore, it is observed that the majority of Creative Energies of African people in Africa and the Diaspora are directed toward purely aesthetic and entertainment creative expressions and endeavors such as music, art, and fashion. The creativity of Black or African people has dominated and influenced the world in the areas of art, entertainment, culture, and fashion, and the degree and level of African Creation Energy can be seen and examined in the degree of Creativity that is exhibited by African people in the areas of music, art, culture, entertainment, and fashion globally. However, Creative expressions such as music, art, and fashion solely for the purpose of aesthetics and entertainment should only come after Creative Energy is used for the purpose of creating, developing and inventing everything needed for survival and well being. Therefore, the solution to Liberate African people from the spellbinding reliance and dependency on Western, European, or Non-African technology is to engineer, invent, and Create African technology. The word "Technology" means "applied knowledge", therefore, to be dependant on the "Technology" of another is to be dependant on someone else to think for you! Technology or "applied knowledge" in the broadest sense is the entity that is the most spellbinding and captivating for African people by non-Africans. Religion is a technology or invention that applies amongst other sciences, the sciences of Psychology and Sociology which spellbinds and captivates the minds of

African people. Money is a technology or invention that applies amongst other sciences, the Science of Economics, and spellbinds and removes African people away from real Natural resources. Technology in the form of Inventions applies science to make life easier and spellbinds the Minds, bodies, and energies of African people making African people dependant on the thinking and creativity of other people. Religion, Money, and Technology are the three most spellbinding and captivating forces that African people must be Liberated from in order to advance, and all of these entities fall under the umbrella of "Technology" (Applied Knowledge). Therefore, it is the goal of African Creation Energy to Liberate African people from the "Spell of Technology".

It was Technology, either in the form of weapons, doctrines, or other inventions, that enabled Europeans to colonize, enslave, conquer, perpetuate, and enforce their rule over African people and the world. Anything that threatens the survival, well-being, and free expression of African culture and concepts is indeed oppressive and requisite for Liberation. Liberation from oppressive entities may require physical conflict, but until African people create African technology that is competitive with, or better than those of our oppressors, engaging in a physical campaign for liberation is understandable from an emotional standpoint, but premature in terms of being sincerely practical resulting in a positive outcome. It is unintelligent to go up against tanks and machine guns with literal or metaphorical sticks and rocks, this action will only

lead to slaughter. It is likewise unintelligent to go to war using weapons and technology that was invented by the very foe that is being fought. The metaphorical SPEAR AND SHIELD (offensive and defensive) technology of Africans must be advanced, upgraded, and progressed to ensure the salvation of African culture and well being after Liberation. The Asian writer Sun Tzu wrote about "The Art of War", however, having the ability to create the necessary technology to ensure that African people are not colonized, enslaved, exploited, or taken advantage of, and ensuring that traditional African culture is preserved is "The Science of War". Technology in the forms of weapons (such as guns, bombs, missiles, lasers, etc.) that threaten the survival, existence, and well-being of Africans are the fear inducing, supporting, and driving forces of the success of other technologies such as Law systems, Religious systems, and economic systems because without the "enforcer" technologies in the form of weapons, African people would immediately see the flaws in the Law, Religious, and Economic systems and would quickly abandon them. In addition to weapon technology as the physical active "Enforcer" of the spell-binding and captivating mental technologies such as Law, Religious, and Economic systems, survival technologies that make day-to-day life easier and simpler (such as electricity, plumbing, automobiles, phones, etc.) are the dependency creating passive enforcers and active encouragers of African people to willingly partake and participate in non-African Culture, Law, Religious, and Economic systems. Furthermore, the misunderstanding about the inner workings of technology

developed by someone who you have let do your thinking and creating for you can and eventually will lead to the same wild speculations and misunderstanding about how nature worked, functioned, and operated, thus created "Technological Spook-ism". "Technological Spook-ism" are the unreasonable and irrational speculations performed by people who do not have the knowledge or ability to develop technology and do not know how technology works, or its capabilities, thus create "Technology Myths" to explain it.

The importance of Liberating African people from the dependency and reliance on Non-African technology is because an invention or creation is just like an offspring; it comes from its creator and therefore has its creator's Nature and likeness. A "Brainchild" in the form of a concept, idea, invention, or creation is just like an actual child in that certain traits and characteristics of the creator are passed on to the creation. Therefore, a person, place, or thing has the nature and likeness of whoever created it. If the creator or inventor of a piece of technology needed for survival has a Natural disposition that is not in favor of the survival and well-being of African people, then that piece of survival technology is actually detrimental to the survival and well-being of African people. In the western world there have been many Scientist, inventors, engineers, doctors, etc of African descent that are responsible for many technological advances in the western world. Lewis Latimer, George Washington Carver, Benjamin Banneker, Elijah McCoy, Garrett Morgan, Granville T. Woods,

Philip Emeagwali, Patricia Bath, Marie Van Brittan Brown, Jane Cooke Wright, Louis Tompkins Wright, etc. and other members of organizations like the **"National Society of Black Engineers (NSBE)"** were African people and organizations that contributed significantly to the revolutionary, technological, and industrial advances that made the United States into the world power that it is today. In order for Africa to advance significantly in the same manner, African people worldwide must contribute their respective creative energies to the development and advancement of Africa. There have been many Afro-centric (African centered) revolutionary **movements** (forces or energies) and organizations for a variety of causes that have emerged over the years. Economic movements such as "Black Wall-street," "Ujamaa - Cooperative Economics" and others have been aimed at empowering African people financially and economically. Movements such as "The Black Panther Party", "Pan-Africanism", "Uhuru", and "African Socialism" have been focused on empowering African people politically; and numerous organizations have been developed to promote, teach, and empower African people spiritually, religiously, historically, and culturally. The African Creation Energy **Movement** (or Force) is one that not only **empowers** the **Black Body** of African people creatively, scientifically and technologically, but also Creates **Power** from African Science and Technology and seeks to be the catalyst in the **African Technological and Industrial Revolution**. If African people need something, then we should possess the Creativity, Knowledge, and Will to create it; in Africa this is referred to as

"Call and Response" – the basis of problem solving and a fundamental aspect of Creativity. As long as African people rely on others to do our Thinking for us is as long as the problems of African people will persist. African Creation Energy provides the creative insight and motivation as well as the correct scientific knowledge to respond to the calls, answer the questions, solve the problems, and create solutions for African people.

The phrase "Reinventing the wheel" is a metaphorical phrase used to mean the duplication, re-constructing, or re-inventing of a basic idea, object, method, technology, or other invention that is known to already exist and be in use. The metaphor "Reinventing the wheel" is based on the fact that the wheel is a prototype, basic, simple, and fundamental human invention that is the corner stone of other technologies and not known to have any operational flaws. Therefore, the metaphor "Reinventing the wheel" attempts to symbolically express a creative endeavor that would seem pointless and add no value to the object, and would be a waste of time, diverting the inventor's energy from possibly more important problems which his or her energy could be put to use. However, African Creation Energy reiterates, "A creation or invention (person, place, or thing) has the Nature of whomever or whatever created or invented it". Therefore, if the metaphorical wheel was created or invented by someone or something who's Nature is not in favor of the survival and well-being of us African people, then us African people will be, and are using

tools and inventions of our own destruction. For this reason, African Creation Energy must Re-invent the metaphorical wheel whenever necessary. Of course, any duplication, reinvention, or reproduction of a creation or invention that already exists must be done within Reason and in accordance with Nature for the survival and well being of African people everywhere.

At this point it is reiterated, the word "Technology" means "Applied Knowledge" and therefore does not just refer to electronics, tools, gadgets, and/or gizmos; but rather to any and all persons, places, and things that can be created, developed, formulated, manufactured, engineered, or invented by applying and using knowledge. This book is written by African Creation Energy for African Creation Energy to develop not just "Free Energy" in the sense that you can light your house and drive your car for free, or no continuous monetary cost, but "**Liberation Energy**" in the sense that you are mentally liberated to know how to do what ever is needed to accomplish any desired goal or create any solution. African Creation Energy is Real Black Power, not just a cliché, but Creative Black Power that can light your house, run your car, teach your children, and guide your government.

*"The Ethiopian Race is not only physically captive to MANKIND but also captive to his CULTURES and INVENTIONS, and this means Woolly-Haired People are mental captives to adverse forces as well as physical. Mental captivity is the worst kind of captivity because it means that the captive is mentally dependent on the captor. Mankind is all peoples with straight hair by Nature... If we need something we must work and get it or **create it**. So long as we remain mentally dependent on other races to do our thinking and plan our progress, that is how long we will remain in the GHETTOES and SLUMS and the POVERTY and DISEASES that they produce... The REASONABLE and PRACTICAL worldwide solution is MENTAL LIBERATION which produces **ETHIOPIAN CREATIVENESS** (the ability to create everything we need) and ETHIOPIAN INDEPENDENCE (the ability to think independent and act independently of other races)... A person, place, or thing is alien to us Ethiopians when it is not of and for us by Nature. A person, place, or thing is in the Nature of whoever created it."*

-The Nine Ball Liberation Information

"The possession of right knowledge, unless accompanied by a manifestation and expression in action, as right wisdom and right overstanding is like the hoarding of precious metals, a vain and foolish thing. Right Knowledge, like wealth, is intended for use. The law of use is universal, and he/she who violates it suffers by reason of their conflict with natural forces."

~Amun Nebu Re Akb Tab



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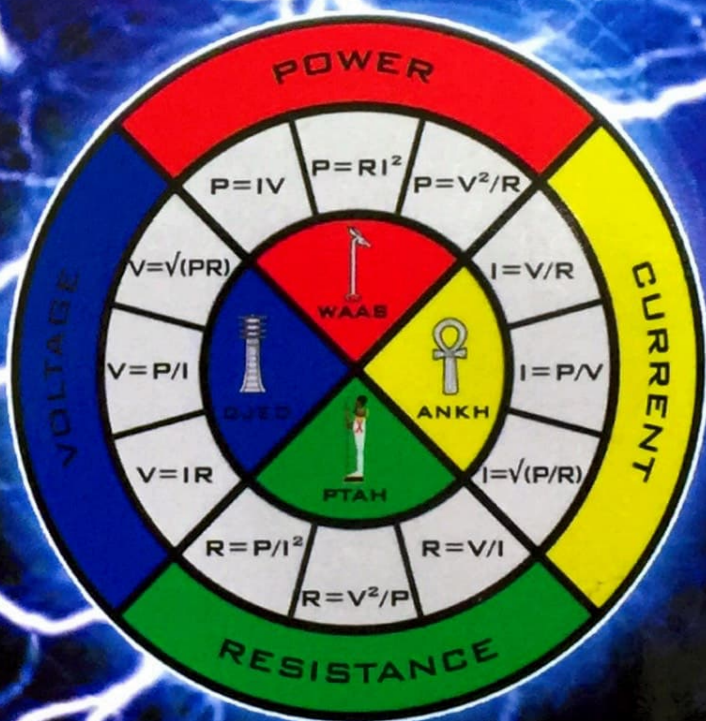


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